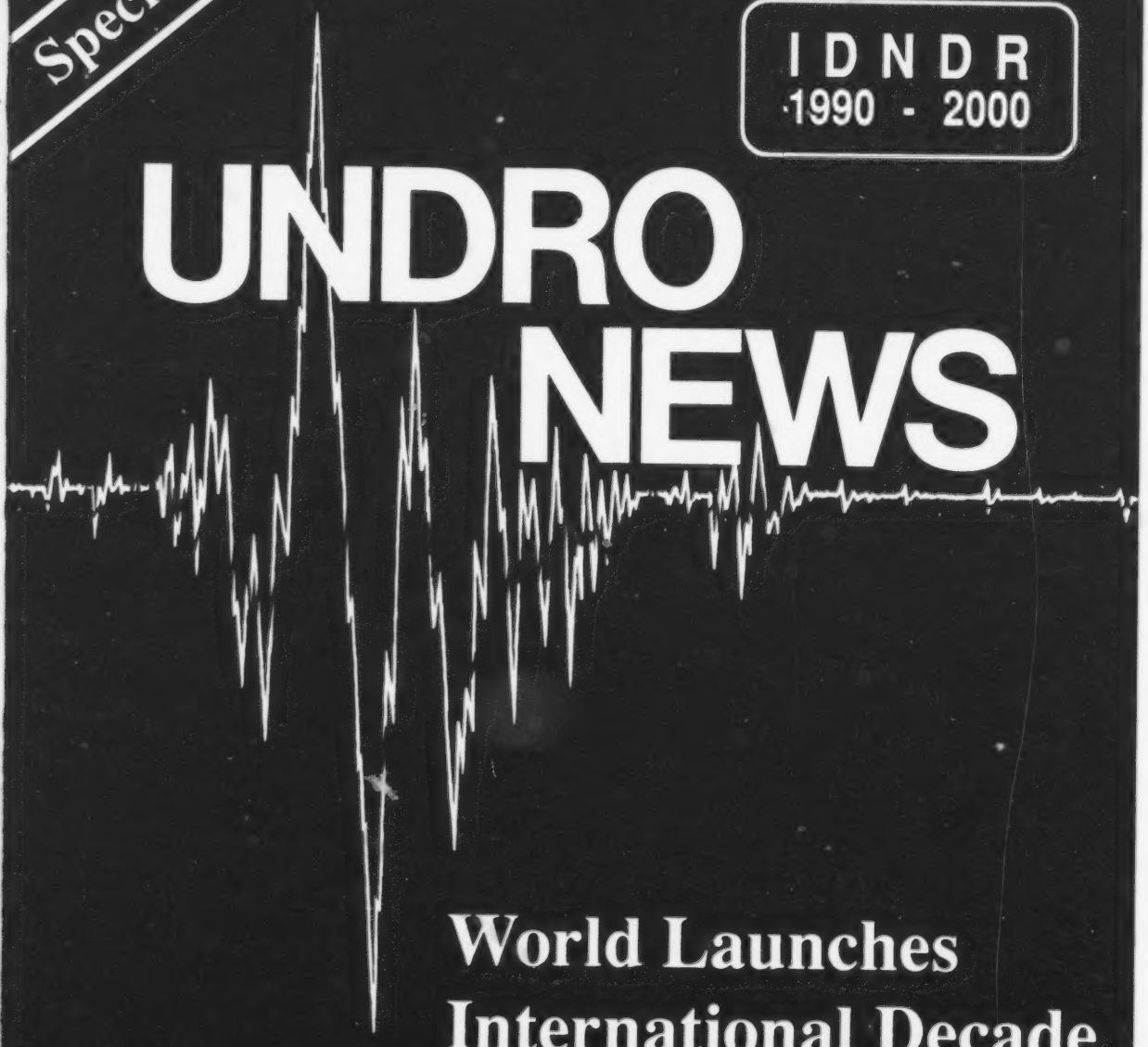
Special Issue

January/February 1990

IDNDR
1990 - 2000

UNDRO NEWS



World Launches International Decade for Natural Disaster Reduction

OFFICE OF THE UNITED NATIONS
DISASTER RELIEF
CO-ORDINATOR

BUREAU DU COORDONNATEUR
DES NATIONS UNIES POUR LES
SECOURS EN CAS
DE CATASTROPHE

IDNDR: A Challenge for the United Nations

Mr. Javier Pérez de Cuéllar,
United Nations Secretary-General

We launch today the International Decade for Natural Disaster Reduction to focus the attention of the international community on a very ambitious objective: saving lives and reducing the physical consequences after natural disasters strike.

We now know or can assess the potential threat from natural hazards such as tropical cyclones, earthquakes, and drought. Moreover, techniques such as effective disaster planning and mitigation measures can be used before a disaster to reduce its consequences. But much remains to be done to bring these capabilities more fully to many of the disaster-prone areas of the world. Hence the need for the Decade.

I am encouraged by the unequivocal expression of international political will by the 155 United Nations member countries which co-sponsored the United Nations General Assembly resolution proclaiming the 1990s as the International Decade for Natural Disaster Reduction, and by the unanimous adoption of that resolution.

For many years the international community has provided more and more humanitarian relief to victims of natural disasters. In so doing it has shown strong solidarity and growing generosity. Moreover, Member States have increasingly expressed that solidarity by calls on the United Nations to bring assistance to people everywhere affected by hazardous natural events and calamities. As early as 1971, the United Nations General Assembly created the Office of the United Nations Disaster Relief Co-ordinator in order to organize international assistance and provide a strong mandate for disaster preparedness and prevention. Many United Nations agencies have also participated extensively in disaster relief and mitigation.

The international community has now taken another important step. The proclamation of the Decade is based on foresight and the awareness that post-disaster relief, in itself, is not a solution to the

Nous lançons aujourd'hui la Décennie internationale de la prévention des catastrophes naturelles afin d'appeler l'attention de la communauté internationale sur un objectif très ambitieux : sauver des vies et diminuer les conséquences matérielles des catastrophes naturelles.

Nous connaissons maintenant, ou nous pouvons évaluer, la menace potentielle que font peser des dangers naturels tels que les cyclones tropicaux, les tremblements de terre et la sécheresse. De plus, avant qu'une catastrophe ne se produise, des techniques telles que des mesures de planification et de prévention efficaces peuvent être utilisées afin d'en atténuer les conséquences. Il reste toutefois beaucoup à faire pour que les nombreuses régions du monde exposées aux catastrophes disposent de ces techniques. Et c'est ce qui justifie le lancement de cette Décennie.

Je suis encouragé par la volonté politique sans équivoque exprimée par les 155 pays Membres des Nations Unies qui ont parrainé conjointement le projet de résolution de l'Assemblée générale des Nations Unies proclamant les années 1990 Décennie internationale de la prévention des catastrophes naturelles, et par l'unanimité qui a présidé à son adoption.

Depuis de nombreuses années, la communauté internationale fournit de plus en plus de secours humanitaires aux victimes des catastrophes naturelles. Ce faisant, elle fait preuve d'une solidarité affirmée et d'une générosité croissante. Les Etats Membres ont en outre demontré cette solidarité en demandant aux Nations Unies d'apporter leur aide aux populations du monde entier touchées par des phénomènes naturels dangereux et des catastrophes. Dès 1971, l'Assemblée générale des Nations Unies a créé le Bureau du Coordonnateur des Nations Unies pour les secours en cas de catastrophe, afin d'organiser l'assistance internationale et de disposer des pouvoirs nécessaires pour prendre des mesures de planification préalable et de prévention. De nombreuses institutions des Nations Unies ont aussi fourni d'importants secours aux sinistrés et participé à l'atténuation des catastrophes.

La communauté internationale a maintenant franchi une autre étape importante. La proclamation de la Décennie

human suffering and economic and physical losses from natural disasters. I welcome this bold action and pledge my own support and that of the United Nations system for the International Decade for Natural Disaster Reduction.

This political will must be translated into concrete commitments and results. The General Assembly has called on all those who can contribute to disaster mitigation to participate in a global effort to act: each in his own sector and all in a coherent forward-looking programme to reduce vulnerability. The wisdom and foresight which produced the Decade must now lead to concrete initiatives and actions designed to bring early results.

The United Nations system, which has a wealth of expertise and knowledge, will respond to the General Assembly's call for priority to disaster mitigation in the programme of all its agencies and organizations. The scientific and academic world and the private sector with their strong technological, intellectual and financial resources must also participate fully in the implementation of the Decade.

The prevention and mitigation of natural disasters is yet another global issue which must be met together by the world's peoples and governments. The will and the means are at hand. In the Decade we begin today, let us join the two to create the action which suffering and destruction demand.

From the Statement made by the Secretary-General on the occasion of the launching of the International Decade for Natural Disaster Reduction, January 1990.

se fonde sur la prévoyance et sur la conscience du fait que les secours consécutifs aux catastrophes ne sont pas en eux-mêmes une solution aux souffrances humaines et aux pertes économiques et matérielles que ces catastrophes naturelles entraînent. Je me félicite de cette action hardie et j'engage mon propre soutien, ainsi que celui du système des Nations Unies pour la Décennie internationale de la prévention des catastrophes naturelles.

Cette volonté politique doit se traduire par des engagements et des résultats concrets. L'Assemblée générale a demandé à tous ceux qui peuvent contribuer à l'atténuation des catastrophes de participer à une action mondiale : chacun dans son propre secteur et tous dans un programme cohérent tourné vers l'avenir et visant à diminuer la vulnérabilité des régions exposées. La sagesse et la prévoyance qui ont inspiré la Décennie doivent maintenant conduire à des initiatives et à des actions concrètes de nature à produire rapidement des résultats.

Le système des Nations Unies riche de toutes les compétences et connaissances qu'il réunit, répondra à l'appel de l'Assemblée générale demandant que la priorité aille à l'atténuation des catastrophes dans les programmes de toutes ses institutions et organisations. Le monde scientifique et universitaire et le secteur privé, dotés d'importantes ressources techniques, intellectuelles et financières doivent aussi participer pleinement à la mise en oeuvre de la Décennie.

La prévention et l'atténuation des catastrophes naturelles représentent un autre problème mondial auquel les peuples et les gouvernements du monde doivent faire face ensemble. La volonté et les moyens sont là. Profitons-en, durant la Décennie qui s'ouvre aujourd'hui, pour prendre les mesures qu'imposent les souffrances et la destruction.

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Japan: Promoting International Co-operation

Mr. Toshiki Kaifu, Prime Minister of Japan

This year, the "International Decade for Natural Disaster Reduction" under the auspices of the United Nations begins. The United Nations Genera! Assembly adopted the resolution designating the 1990s as a decade in which all the countries of the world will join in a concerted international action for reducing the effects of natural disasters, such as the loss of lives and damage to properties.

In recent years, many places in the world have been seriously hit by natural disasters: Bangladesh, Armenia (USSR) and San Francisco (USA) to name a few. The promotion of disaster counter-measures for securing the lives of their people and their properties, and the conservation of national land are of great importance for Japan as well as for any country in the world.

Natural disasters have adversely affected the lives of a great number of people and their effects are serious, especially in developing countries. Japan, as one of the leading countries in the field of disaster counter-measures, whises to promote international co-operation and exchange in order to contribute positively to the solution of those problems.

On the other hand, in our country, every year we are suffering considerable damage by natural disasters, and also recently, due to the urbanization and the information-oriented socio-economic changes, the consequences of disasters have become various and complicated.

The International Decade for Natural Disaster Reduction was designed to gain the peoples' understanding of the importance of disaster prevention and reduction, both in Japan and in other countries of the world, and to promote disaster counter-measures steadily and thus reduce the adverse effects of disasters.

The national government, in respect to the goals and objectives of the Decade, and with the co-operation of the local governments and the private organizations, shall carry out commemorate activities, enhance various disaster counter-measures and promote international co-operation and exchange for disaster prevention and reduction. I hope that the Decade will gain understanding and co-operation of the great majority of our people so that the Decade will achieve fruitful results. ■

New Year's Message by Mr. Toshiki Kaifu, Prime Minister of Japan and President, Government Headquarters for the IDNDR, on the occasion of the launching of the Decade.

Federal Republic of Germany Pledges Continued Support

Mr. Hans-Dietrich Genscher, Foreign Minister, Federal Republic of Germany.

The last decade of the twentieth century marks the beginning of the International Decade for Natural Disaster Reduction (IDNDR). The momentum gained during the initial phase must be used profitably. The Government of the Federal Republic of Germany expresses its appreciation to the initiators of the proposal for the Decade and thanks all those who have paved the way for it. The Federal Government reaffirms its determination to contribute to a fruitful process of implementation.

So far, the international commu-

READEX FICHE

nity has made great efforts to reduce the material losses and human suffering caused by natural disasters and has expressed its solidarity through post-disaster humanitarian emergency assistance. Now another complementary step of particular importance has to be taken: to render disaster-prone communities less vulnerable and to enable them to withstand better the impact of natural or technological disasters - be it through the analysis and evaluation of data, the installation of early-warning systems or improved emergency management and co-ordination.

The Decade's goals and objectives are to be attained in a co-ordinated way by a number of bodies, and in particular by the Office of the United Nations Disaster Relief Co-ordinator (UNDRO). It is in fact the General Assembly's resolution of 1971, establishing UNDRO, that contains all the essential elements of the Decade's philosophy. The newly-established Secretariat for the International Decade for Natural Disaster Reduction now faces the task of developing strategies and ideas, motivating peoples and Governments, and getting them to engage in a successful operation.

The Decade's goals and objectives will obviously have to be approached in a pragmatic manner for, in this way, sources of project-related funds can be opened up more easily.

At the national level, the Federal Government supports the activities of the German Committee for the Decade, which met in Bonn on 20 September 1989 for the first time. The Committee's initiatives reflect the combined expert knowledge of civil protection and disaster relief managers, of scientists, industrial managers and media representatives. The Government of the Federal Republic of Germany will do its utmost to ensure that the German Committee provides a strong input for the dynamic development of the IDNDR. ■

USA: Preventing Natural Disasters from Becoming Human Disasters

by Marilyn T. Quayle

When the winds of hurricanes topple trees, or the earth rumbles and fissures appear to swallow the very ground beneath their feet, victims of disasters often turn to their governments for help. Working with other donors and the private voluntary sector, disaster relief becomes a government priority equal to none.

Ideally, the private sector works in tandem with government efforts. While restoration of services essential to commerce is vital to the private sector, industry can play the role of donor, and assist in emergency planning and community organizing. As we begin the International Decade for Natural Disaster Reduction, it is appropriate to consider the role of the private sector, particularly corporations, in disaster preparedness and relief.

When the Loma Prieta earthquake struck California last fall, the Bechtel Corporation loaned structural engineers to the federal and state government to assist in the assessment of building safety. Evian Waters offered thousands of litres of bottled water to earthquake victims. Target Stores/Sherwin Williams offered housewares, hardware, paint and other building materials.

After Hurricane Hugo wound its destructive path through the Caribbean and the southeast United States last fall, Texaco donated relief supplies and a generator to people in the Caribbean affected by the storm.

Donations such as these can help disaster victims regain a sense of order. Ensuring that donations are appropriate is critical. Building or temporary shelter supplies are, in most disasters, far more useful than clothing or food. In the United States, organizations such as Volunteers in Technical Assistance (VITA), a non-profit organization, can serve as a clearinghouse for corporations or organizations wishing to make international donations. VITA records offers of technical or material assistance and provides that information immediately to relief organizations working at the disaster site.

Corporations wishing to make major donations to disaster relief can also work through donor nations involved in relief activities. The Office of U.S. Foreign Disaster Assistance co-ordinates the U.S. Government's disaster response and can assist in directing private donations to the proper recipients in affected areas.

Private sector activities must extend beyond short-term disaster relief, however. Corporations should have detailed disaster plans in place to protect employees in event of a disaster. Evacuation plans, personnel trained in first aid and appropriate building infrastructure are important elements in a disaster plan. For example, back-up

In the immediate aftermath of the Loma Prieta earthquake, last October, Marilyn Quayle, wife of the US Vice-President, surveys damage in San Francisco.

Steven Purcell/
The White House

generators can enable a corporation or plant to continue functioning, as well as serve as a central information and gathering point for families and community members affected by disaster.

Organizations which face the risk of man-made hazards and which have established disaster plans keyed to industrial accidents should review these plans to ensure their relevance to natural disasters.

The Awareness and Preparedness for Emergencies at Local Level (APELL) programme, an emergency planning effort of the United Nations Environment Programme, explains a process for preparing for and responding to technological accidents. Many points in the APELL process can also be applied to natural disaster preparedness. The basic objectives of the process are to "increase knowledge in the community about possible risks and hazards in the area, and to develop, on the basis of this information, co-ordinated emergency response plans". Any natural disaster plan should also cover these points. The best plans are of no value, however, if not tested. Regular drills are as important as the plans themselves.

Another important aspect corporations should consider in disaster planning and relief activities is their inventory of supplies. Plan ahead and stock the supplies which could be used in event of a disaster. For example, Occidental Petroleum Corporation stocks food, oxygen and non-prescription drugs at checkpoints in its California headquarters. Flashlights and bottled water are also stockpiled.

Determine which items would be required for your company's use to assist employees, and make a list of items which could be donated to the community. Let local emergency managers know what supplies are available for donation. Batteries and pharmaceuticals are useful items for victims in communities affected by disasters. Construction businesses might consider stocking additional building materials during hurricane season. Companies in the soft drink industry might instead bottle water for several days after a disaster.

Private businessmen and public officials alike would agree that ours is a fragile and precious society. We must take steps together to protect that which we value from the hazards of natural disasters. The International Decade for Natural Disaster Reduction can provide the impetus to take disaster preparedness and response efforts forward to prevent natural diasasters from becoming human disasters. ■

Marilyn Tucker Quayle, wife of U.S. Vice President Dan Quayle, has a special concern for natural disaster preparedness and response. Through her involvement with this issue, Mrs. Quayle hopes to have an impact on the level of preparedness of people worldwide, and to encourage everyone to reach out to help those affected by natural calamities.

Her interest in these issues spans domestic and international boundaries.

La Décennie : la réponse à un besoin vital

Dr. Bernard Kouchner

"Je me réjouis du lancement de la Décennie internationale de la prévention des catastrophes. Elle répond à un besoin souvent exprimé par les organisations humanitaires, préoccupées plus encore de prévention que de traitement, face à un phénomène planétaire qui, au cours des deux dernières décennies a provoqué près de 3 millions de morts et 800 millions de sans abri, démunis ou atteints dans leur santé : victimes dont 90 % se trouvent dans les pays du tiers-monde.

Une confrontation des données et une réflexion sur les solutions à apporter de façon préventive à ces phénomènes sont donc nécessaires. Une étude systématique des facteurs directs, indirects ou induits exerçant une influence sur la préparation, et la conduite des secours en cas de catastrophe et un examen des corrélations entre ces différents facteurs est donc indispensable.

A cet égard, les impulsions données par le Comité Directeur de la décennie depuis 1988, ainsi que les travaux du groupe spécial international d'experts pour la décennie ont déjà produit une présentation ordonnée des exigences, et des propositions utiles de mesures qui rejoignent, pour une large part, celles issues du milieu associatif et de l'expérience des volontaires français [...]."

■

Extraits de la conférence prononcée à l'UNDRO, le 23 janvier 1990, par le Dr. Bernard Kouchner, Secrétaire d'Etat auprès du Premier Ministre (France), Chargé de l'Action Humanitaire.

Minimiser l'impact des catastrophes

Dans la plupart des cas, l'occurence des catastrophes naturelles ne peut être évitée et ne pourra pas l'être vraisemblablement à l'avenir.

En revanche, il est désormais possible d'en limiter les conséquences épouvantables, car les progrès scientifiques et technologiques existants sont suffisamment avancés pour prévoir le lieu, et dans une moindre mesure, le moment où risquent de se produire certaines catégories de catastrophes naturelles, tandis que par ailleurs, il existe des données abondantes sur les mesures qui peuvent être prises à l'avance pour atténuer l'impact destabilisateur de ces calamités quand elles se produisent. En peu d'années, la perception de ces phénomènes, au moins au niveau scientifique, a considérablement évolué pour justifier de nouveaux espoirs.

Et si le monde d'aujourd'hui est plus vulnérable que jamais aux catastrophes, comme l'histoire récente le démontre amplement, un nouveau champ s'ouvre progressivement devant la solidarité humaine et la coopération internationale.

Dans ce contexte, nous affirmons qu'au cours du XXI siècle, les mesures prises en prévision des catastrophes naturelles et le soin apporté à la protection de l'environnement (dont l'altération aggrave la vulnérabilité aux désastres), ces mesures et ce soin rejoindront en termes de priorité les accomplissements dans les domaines de la santé, de l'éducation, du logement ou de l'alimentation et le développement des ressources humaines de manière générale.

Dans le sillage de la communauté scientifique mondiale, les Services chargés de la protection civile dans de nombreux pays savent désormais que notre époque a semé les germes de désastres majeurs. En effet, la densité de la population dans les zones sinistrées a révélé dans la plupart des cas, la paralysie catastrophique des communications, l'insuffisance dans l'application des normes de sécurité, la fragilité des lignes de sauvetage et des lacunes graves dans l'information et l'éducation des populations.

Dans le monde en développement la situation est encore pire, puisque les pays de cette région qui concentrent l'essentiel de la démographie mondiale, subissent selon les évaluations 90% des dommages causés par les catastrophes naturelles dans le

monde. Leurs moyens de réponse à l'adversité sont si réduits qu'une seule catastrophe peut annihiler des décennies de développement et dans certains cas déstabiliser leur équilibre politique et social.

Au demeurant, les progrès actuels de la science permettent d'affirmer que le lancement de la Décennie a lieu dans des circonstances propices du fait du recours accru aux satellites en orbite et l'utilisation systématique des techniques utilisées dans la construction, l'amélioration des méthodes de collecte, de gestion et de diffusion des données, ainsi qu'une meilleure compréhension des phénomènes géotectoniques, météorologiques et climatiques.

Ces progrès permettent sans aucun doute, de minimiser l'impact des périls naturels. Il importe en conséquence que le programme d'action mondial susévoqué bénéficie largement aux pays en développement dans ses phases d'élaboration et d'exécution, et qu'une attention particulière soit accordée à la mise en place de systèmes d'alerte rapide, à la formation des formateurs et au transfert technologique.

Dans ce contexte, la constitution de comités nationaux capables de mobiliser toutes les compétences techniques et politiques requises pour la prévention et la réduction des catastrophes naturelles, est d'une importance décisive, dans toute la mesure où il incombe au premier chef aux gouvernements des pays concernés, la responsabilité de l'action concertée à entreprendre dans le cadre de la Décennie internationale. ■

Extraits de l'intervention de la délégation marocaine, faite par M. Abderrahim Ben Moussa, Ministre Conseiller, devant la 2e Commission de la 44e Assemblée générale.

UNDRO's Role in the IDNDR

Mr. M'hamed Essaafi, United Nations Disaster Relief Co-ordinator

Disaster reduction, or mitigation as it is also called, has always been at the centre of UNDRO's Mandate on a par with relief co-ordination albeit perhaps less visible. UNDRO's creation at the start of the 1970s stemmed from concern for the losses and suffering of disaster victims around the world. Now, almost 20 years later, the same concern has prompted the General Assembly of the United Nations to proclaim the 1990s the International Decade for Natural disaster Reduction.

Thus, the aims and purposes of the Decade are congruent with an essential part of UNDRO's raison d'être. Not surprisingly, the General Assembly decided to establish the IDNDR Secretariat in close association with UNDRO. Indeed, UNDRO considers promotion of and support for the Decade to be a natural element of its own activities.

Within the United Nations system, the Director-General in charge of Development and International Economic Co-operation has been designated as the focal point for overseeing and co-ordinating the IDNDR programmes and activities, in close co-operation with UNDRO and the IDNDR Secretariat. This gives UNDRO a central role in the activities of the Decade, through its day-to-day links with the IDNDR Secretariat, and its close collaboration with the UN Agencies concerned.

To be effective in its designated role, the Office must also come forward with concrete proposals for projects of clear and direct benefit to disaster reduction. UNDRO's own mitigation activities have received a new impetus, partly through its own efforts and partly through the dynamic co-operation with the IDNDR Secretariat. Already a number of mitigation projects - as well as relief activities (for instance, the one undertaken in connection with last October's earthquake in Algeria), have been placed firmly within the framework of the Decade. In this context, UNDRO will identify and evaluate projects for possible inclusion in the IDNDR programme, execute some of these projects as appropriate, and assist in fund-raising.

On an everyday basis, in addition to putting all its expertise, its 18 years of experience in disaster mitigation, its data base and library and its electronic network facilities (UNIENET) fully at the service of the Decade, UNDRO will also continue to provide the IDNDR Secretariat with administrative and support services, including communications, data processing and information. ■

LRCS Urges Active Role for National Societies

The International Decade for Natural Disaster Reduction has now started. Let me first offer my congratulations on the adoption of the Resolution 44/236 by the Forty-fourth session of the United Nations General Assembly on 22 December 1989. The Resolution, setting up the international framework of action for the IDNDR, calls for the active participation of the international community in the Decade.

The League of Red Cross and Red Crescent Societies, for its part, adopted decision 30 at the VII Session of its General Assembly in Geneva in October 1989. The decision, *inter alia*, reaffirms the support to be given by the League, in co-operation with the appropriate organizations of the United Nations system, to achieving the objectives of the "International Decade for Disaster Reduction" and urges National Societies to take an active role in the national and regional committees for IDNDR which will be created to reduce, through adequate preparedness and prevention measures, the consequences of natural disasters.

The essential functions of the League as the International Federation of National Red Cross and Red Crescent Societies worldwide (at present 149 member Societies), include:

Mr. Pär Stenbäck, Secretary-General, League of Red Cross and Red Crescent Societies

- to assist National Societies in their disaster relief preparedness, in the organization of their relief actions and in the relief operations themselves and

- to organize, co-ordinate and direct international relief actions in accordance with the "Principles and Rules for Red Cross and Red Crescent Disaster Relief" adopted by the International Conference of the Red Cross and Red Crescent. (League Constitution Art. 3).

In fact, since its foundation in 1919 the League has been involved in more than 750 disaster operations; this experience taught the League already in the early 1960's the crucial importance of disaster preparedness in reducing the negative impact of disasters. The League has promoted the establishment of National Relief Plans (Government) in a number of particularly disaster-prone countries in which the respective National Red Cross/Red Crescent Societies play a role, depending on their personnel and material resources. The "Principles and Rules for Disaster Relief" already mentioned establish clear guidelines for the organization and preparation of a Relief Plan at the national level.

The League has co-operated closely with the Office of the United Nations Disaster Relief Co-ordinator (UNDRO) and specialized UN agencies and concerned voluntary organizations in a number of large-scale projects. The establishment of cyclone tracking systems covering the world's main cyclone areas is a pilot project of the World Meteorological Organization (WMO). Within this scheme, the League Secretariat, together with the National Red Cross/Red Crescent Societies in the main cyclone areas in Asia and the Pacific, the South-West Indian Ocean States and the Caribbean, has been particularly involved in the establishment of disaster plans assigning responsibility for such essential services as rescue work, the shelter, feeding and medical care of victims, the collection, transport and distribution of relief supplies and communications.

Disaster preparedness measures not only cut down losses but can also help improve general living conditions. Red Cross/Red Crescent look on its involvement in preparedness programmes as a contribution to the general development of a country.

Construction of up to 500 cyclone shelters in Bangladesh to protect the lives of people living in the high risk zone of the coastal area, supported by seven Sister Societies;

(continued on page 35)

United Nations Launches International Decade for Natural Disaster Reduction

A concerted global effort to reduce the destructive impact of natural disaster was launched on 11 December 1989 when the United Nations General Assembly proclaimed 1990 the International Decade for Natural Disaster Reduction (IDNDR), beginning on 1 January 1990.

Over the next ten years, nations throughout the World are asked to give special attention to programmes and projects designed to reduce loss of life, property damage and economic and social disruption caused by natural disasters. Such disasters alone during the past two decades have killed an estimated 3 million people. The overall objective of achieving a substantive reduction in the impact of natural disasters will be pursued through new emphasis on pre-disaster activities including planning, prevention and preparedness; an innovative approach based on state-of-the-art scientific and technological knowledge will aim at reducing the vulnerability of society, through the participation of all sectors.

The proclamation of the Decade will reflect two main developments, namely: the increasing impact of natural disasters in terms of loss of life, physical damage and effects on the economic development of vulnerable countries; and the progress achieved in scientific and technological knowledge which has been such as to allow its application to disaster mitigation through transfer of technology.

Framework adopted by General Assembly

The General Assembly adopted an international framework for the implementation of the Decade comprising several key elements among which:

- a call on all Governments to adopt specific policy measures at the national level designed to achieve disaster mitigation, and to participate in a concerted international effort;

- a call to scientific and technological institutions, financial institutions, foundations, and related national and international non-governmental organizations to participate fully in the activities of the Decade;

- guidelines for actions to be taken by organizations and bodies of the United Nations system in order to give priority, in their activities, to the reduction of the impact of natural disasters; and

- organizational and financial arrangements at the international level comprising:

- A Special High Level Council consisting of a few internationally-prominent persons to promote public awareness and mobilize support for the Decade from public and private sectors will be created as well as Scientific and Technical Committee composed of experts appointed by the Secretary-General on the basis of personal capacities and qualifications which will be responsible for developing overall programmes addressing priorities and gaps identified at the national level, for evaluating activities carried out during the Decade; and

- a small secretariat is to be established in close association with UNDRO at Geneva to be responsible for substantive and secretarial support to the international mechanisms and for day-to-day co-ordination of activities.

The entire framework is to be supported by extrabudgetary contributions and, to this end, a Trust Fund is to be established by the governments, international organizations and other sources, including the private sector.

The General Assembly also decided that the second Wednesday of October be observed during the Decade as an International Day for Natural Disaster Reduction in a manner befitting the goals and objective of the Decade.

Background

Preparations for the Decade began

"Secretary-General establishes Secretariat and Trust Fund for the International Decade for Natural Disaster Reduction."

In line with the implementation of the provisions of General Assembly resolution 44/236, the IDNDR Secretariat has been established in Geneva in close association with the Office of the United nations Disaster Relief Co-ordinator. Similarly, a Trust Fund for the IDNDR has been established in order to receive and administer the extrabudgetary resources that will be provided for the implementation of the Decade. Timely and substantive contributions are an indispensable prerequestive for a successful, result-oriented start to the IDNDR. The General Assembly has taken an innovative step by encouraging not only Governments but also donors from other sectors including industry, foundations and other private sources to provide financial support for the activities of the Decade.

in 1988 with the appointment by the Secretary-General of a United Nations Steering Committee and an International *ad hoc* Group of Experts, pursuant to General Assembly resolution 42/169 which proclaimed the 1990s as the International Decade for Natural Disaster Reduction. The result of the work of these two bodies is reflected in the report from the Secretary-General to the forty-fourth session of the General Assembly.

At the current session, the General Assembly reaffirmed the overall objective of the Decade - that is, to reduce loss of life, property damage and economic and social disruption caused by natural disasters, as well as the following specific goals:

❒ to improve the capacity of each country to mitigate the effects of natural disasters expeditiously and effectively, paying special attention to assisting developing countries in the assessment of disaster damage potential and in the establishment of early warning systems and disaster-resistant structures when and where needed;

❒ to devise appropriate guidelines and strategies for applying existing scientific and technical knowledge, taking into account the cultural and economic diversity among nations;

❒ to foster scientific and engineering endeavours aimed at closing critical gaps in knowledge in order to reduce loss of life and property;

❒ to disseminate existing and new technical information related to measures for the assessment, prediction and mitigation of natural disasters; and

❒ to develop measures for the assessment, prediction, prevention, and mitigation of natural disasters through programmes of technical assistance and technology transfer, demonstration projects, and education and training, tailored to specific disasters and locations, and to evaluate the effectiveness of those programmes.

The Decade calls for a broad international effort intended to promote the adoption and universal application of advanced approaches to disaster reduction, develop techniques of implementation that are low-cost, broadly applicable and adaptable to the needs of all societies, and bring about a better appreciation of the positive relationship between disaster reduction and the continuation of economic and social development and, in so doing, the United Nations Member States recognized the immense potential for sharing and bringing into practical use the scientific and technical understanding of the causes and impact of natural disasters in order to reduce human and property losses, particularly in developing countries.

New approaches adopted to guide actions during the Decade

❒ a shift in emphasis to pre-disaster planning and preparedness while sustaining and further improving post-disaster relief and management capabilities;

❒ an acceptance of an integrated approach to disaster reduction that would include a shift in public attitudes towards disaster mitigation and the development of programmes linking prevention, warning research, preparedness in order to reduce vulnerability;

❒ public education to shift society's perspective from passive acceptance of disaster consequences to awareness of the opportunity for disaster mitigation and the role of individuals in protecting themselves;

❒ integration of disaster prevention and preparedness into the national and local planning process;

❒ enhancement of organizational strengths and training of specialists to improve disaster mitigation resources; and

❒ promotion of increased technology and knowledge transfer to those at risk.

Mechanism for worldwide participation created

An essential feature of the Decade will be the mechanism for worldwide participation, designed to reach out to all sectors of society that have the po-

The United Nations General Assembly UN/Milton Grant

tential to bring about a reduction in the impact of disasters and mitigate their effects through the following elements:

❒ National Committees or entities responsible for implementation of national programmes, for co-operation on a regional basis, and for providing assistance to other countries - in particular, the national entities should survey existing mechanisms and facilities for hazard reduction, assess the particular requirements of their countries and develop national strategies to attain the Decade's goals;

❒ The United Nations System is called upon to accord priorities in the operational activities of its organizations and bodies, in a concerted manner, to natural disaster preparedness, prevention, relief and short-term recovery including economic damage risk assessment. In particular, in order to ensure adequate oversight and co-ordination of the programme of activities referred to above, the Director-General for Development and International Economic Co-operation will act as the focal point in close co-operation with the United Nations Disaster Relief Co-ordinator and the Director of the Decade secretariat. The specific responsibility of the Office of the United Nations Disaster Relief Co-ordinator is recalled by the General Assembly.

❒ The United Nations is also requested to formulate and implement public information programmes aimed at raising awareness of disaster prevention among the general public. In fact, in the recommendations put before the General Assembly, specific functions in the overall effort called for by the Decade are identified for the information media in view of the need to increase the general public's perception of the mitigation potential of disaster prevention and preparedness activities. At the local and regional levels, the Decade will be supported by the United Nations Resident Co-ordinators and the field representatives of the specialized agencies and bodies, and the regional commissions are also urged to participate.

❒ Scientific and professional societies which are well equipped to contribute to the Decade by promoting the application of existing knowledge to disasters of all types in widely different communities and by fostering endeavours to close the critical gaps in knowledge of hazards and their impacts;

❒ National and international non-governmental organizations which by their capabilities, experience and diversity, will contribute in many significant ways that often are unique to each organization - for example, public education on self-help procedures, and the efforts of the International Council of Voluntary Agencies to facilitate the sharing of disaster experiences among all voluntary groups; and

❒ Donor organizations, industrial and financial institutions, such as insurance, banking, and construction, and the communications industry are expected to play a major role in the Decade. Finally, there will be mechanisms to involve the general public - both in the receiving of education and information and in contributing through community and individual actions; the best prepared individuals and communities are those who are aware of their vulnerability and have taken coherent steps to reduce it.

Join us in an exchange of views on the International Decade for Natural Disaster Reduction (IDNDR)! We look forward to your comments, questions or suggestions. Letters should be addressed to:

IDNDR Secretariat
UNDRO
Palais des Nations
CH-1211 Geneva 10
Switzerland.

The Role of Science and Technology in the IDNDR

by Dr. Frank Press

For millenia we have had little effective response to the common threat of volcanoes, earthquakes, floods, landslides, severe storms, wildfires, and other hazards wrought by nature's more violent forces. As a result of progress in science and technology, however, we now have the opportunity of significantly reducing losses to natural disasters. Application of this knowledge on a global basis would result in immediate reductions in human suffering and social and economic disruption.

International collaboration among scientists and engineers, as well as political and social scientists, government leaders and others is a powerful tool and the potential benefits of coordinated action are great - each nation will gain partners in gathering hazard data, and the chance to develop and apply mitigation strategies more quickly and at lower cost than could be achieved by individual national strategies.

The scientific and technological contribution to the IDNDR should be a programme of shared knowledge and the shared pursuit of new knowledge. All nations can contribute to and benefit from the global flow of new data on hazard events.

The participation of international scientific and engineering organizations and the assistance of the United Nations agencies concerned is essential to realizing the goals of the IDNDR. These organizations should play leading roles in the international transfer of data and techniques, the brokering of international research efforts, the establishment of training programmes and scientific exchanges, and other activities that will promote several goals:

- the enhanced flow of information and experience across geographic and national boundaries;
- creation of the critical mass of knowledge, experience, and investigative capability required to develop disaster reduction on a global scale; and
- rapid realization of demonstrable results that will advance scientific and technical understanding.

These goals may be realized through a multiplicity of actions. They may include bilateral or multilateral research efforts such as the 1981-1984 international landslide prevention project sponsored by UNESCO, which resulted in international workshops and significant landslide research and mitigation studies. Demonstration projects may be undertaken in which one or more nations choose a problem site to demonstrate a specific mitigation strategy. For example, a multinational team could address the correlation of casualties in severe natural disasters to specific forms of construction and failure mechanisms. Technical assistance, especially to developing nations, should include such efforts as helping to adapt building codes or hazard-resistant design to accommodate local building materials and construction techniques or development of hydrological models to anticipate flood timing and volume for use in hydrological planning.

The concept of the IDNDR has its origins in the scientific and technical community and it will continue to depend on the expertise, imagination, and dedication of this community to succeed. Clearly then, scientists and engineers must not only pursue the science and technology of disaster reduction, but must also be participants in the political and social processes of reducing disasters' toll, in order to achieve the highest goal of science and technology - to serve the common good.

■

Frank Press is President of the U.S. National Academy of Sciences. He was a professor of seismology at the Massachusetts Institute of Technology and served as Science Advisor to President Jimmy Carter.

Les Priorités de la Décennie pour les pays en voie de développement

par Mohamed Benblidia

L'ambition exprimée par l'Assemblée Générale des Nations Unies dans sa résolution A 42/169 du 11 décembre 1987 - et l'espoir commun - c'est qu'au terme de ce siècle... "chaque pays soit à même d'atténuer rapidement et efficacement les effets des catastrophes naturelles"...

Dans certains pays, principalement les pays industrialisés, la gestion et la réduction des risques majeurs ont atteint un niveau de maîtrise satisfaisant et qui va en s'améliorant. Ce n'est pas le cas - et loin s'en faut - dans les pays en voie de développement où la prise en charge de la réduction des conséquences, en général toujours graves, des grandes catastrophes naturelles est très insuffisante par rapport aux menaces actuelles et futures. Il s'agit donc, pour ces derniers pays, de dresser un plan d'actions et d'organisation leur permettant d'être capables au terme d'une période de dix années, d'affronter les désastres naturels éventuels auxquels ils sont exposés et d'en atténuer les dommages qui en *résulteraient pour leur population, leur économie et leur environnement.*

L'élaboration de ce plan, en raison de la nécessité d'améliorer très vite la réduction des risques naturels dans les pays en voie de développement, doit comporter la définition de ce qu'il faut absolument entreprendre en tout premier lieu.

■ Quand on se réfère aux dernières décennies, on constate que l'impact des catastrophes naturelles a été, dans les pays en voie de développement, de plus en plus fort. Le nombre de pertes de vies humaines, de blessés et celui des destructions ont augmenté dans des proportions dramatiques. Les économies de ces pays ont, à chaque catastrophe, subi des chocs qui ont perturbé gravement le rythme de leur développement.

Il apparaît malheureusement que cette situation ne peut qu'empirer, si l'on ne prend pas des mesures rapides de réduction des risques. En effet, l'accroissement démographique en général très élevé dans les pays en voie de développement, l'exode rural, combiné à un développement très rapide des agglomérations urbaines, sont autant de facteurs d'accroissement de la vulnérabilité de ces régions par rapport à la plupart des aléas naturels (séismes, cyclones tropicaux et ouragans, inondations, éruptions volcaniques, tsunamis, glissements de terrains...).

L'importance des problèmes et des pertes est tellement grande, et de plus croît tellement vite, que l'on doit agir d'abord et rapidement au niveau des régions à haut risque. *La détermination de ces régions particulièrement dangereuses nous semble être de première nécessité, en même temps que la définition d'un programme particulier d'atténuation pour chacune de ces régions.*

■ Les pays en voie de développement ne se trouvent évidemment pas tous dans la même situation par rapport au problème des catastrophes. Tout d'abord parce que les différents types d'aléas naturels ne les menacent pas tous de manière égale. De plus, leurs systèmes de prévention des désastres sont à des niveaux d'évolution, de complexité et d'efficacité très variables d'un pays à un autre.

Cependant ces différences ne sont pas telles qu'elles fassent de chacun de ces pays un cas particulier. En effet, leur retard dans le développement économique et social, plus ou moins grand, mais général, les rend plus vulnérables que les pays industrialisés, dans la mesure où ce retard les empêche de maîtriser complètement et efficacement tout système complexe et intégré de prévention et de lutte contre les catastrophes naturelles.

Lors de catastrophes survenues ces dernières décennies, on a pu constater des éléments d'aggravation

des impacts de catastrophes qui sont les suivants :

❒ ignorance ou méconnaissance du danger par les populations.

❒ absence d'observations et de systèmes de surveillance des phénomènes naturels provoquant des désastres.

❒ déficience des systèmes d'alerte.

❒ faiblesse, voire inexistence, de plans d'intervention et de secours en cas d'urgence.

❒ inorganisation dans la gestion des situations post catastrophes.

❒ manque de règles et de normes de sécurité. Si elles existent, non respect de ces règles.

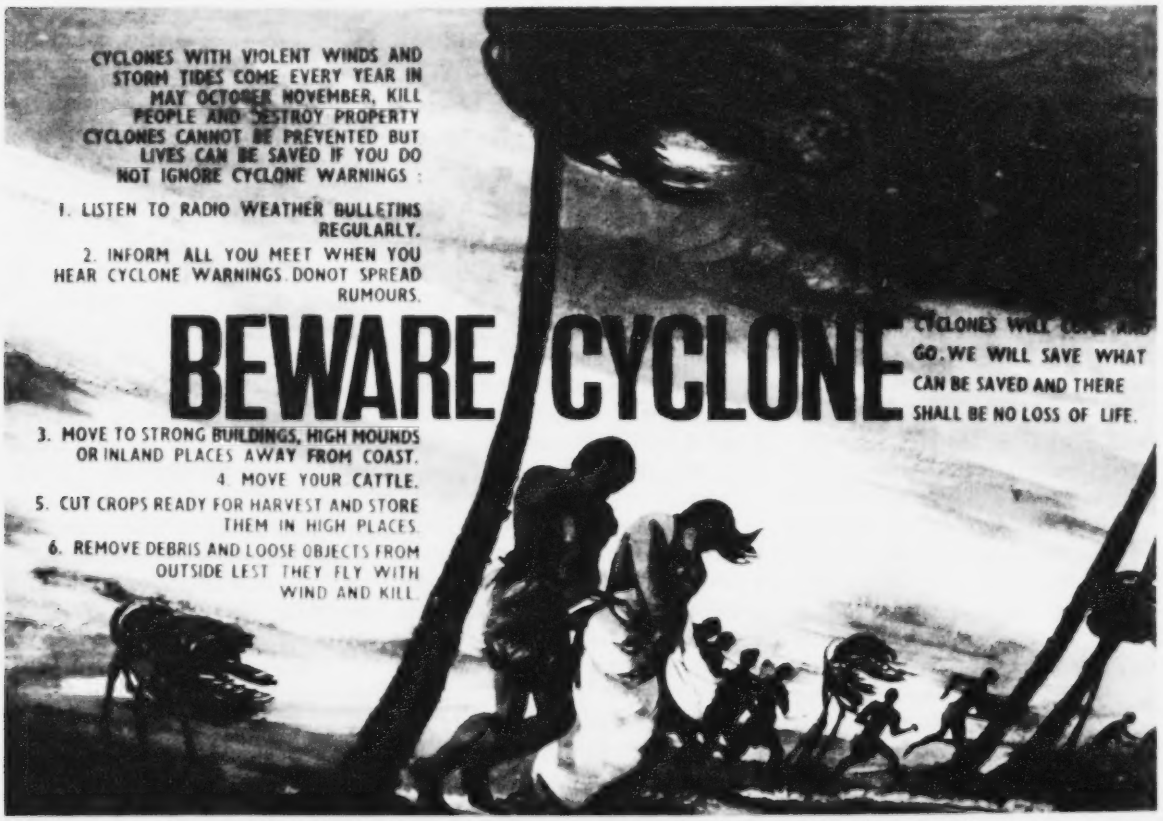
❒ non-maîtrise du développement urbain dans les zones menacées et plus généralement absence de plans d'aménagement du territoire.

Ces constats traduisent le fait qu'il n'existe, en général, *pas de politique nationale* clairement définie et affirmée, ni de plans couvrant globalement et intégralement tous les aspects de l'atténuation des risques.

■ Les décideurs politiques et les planificateurs de la plupart de ces pays ne sont pas très convaincus de la nécessité des plans de prévention des risques, dont ils estiment les dépenses trop élevées eu égard à la faiblesse des ressources et de l'importance des besoins du développement économique. Ceci est très net dans les pays où les désastres sont potentiellement sévères mais de fréquence faible.

D'où une attitude générale qui à tous les niveaux exprime un certain fatalisme face aux aléas. On attend la catastrophe et on réagit comme on peut. Et comme les catastrophes, même les plus graves, s'oublient rapidement, on se réinstalle dans l'attitude passive du passé. *C'est ce comportement qu'il faut combattre avec vigueur, en toute priorité,* au niveau des responsables politiques, comme au niveau des populations si l'on veut bâtir avec quelque chance de succès un système de gestion des risques qui permette d'atténuer les pertes humaines et les destructions.

■ Si on a réussi, dans un pays, à affermir la conviction que l'on peut agir avant la catastrophe pour en


CYCLONES WITH VIOLENT WINDS AND STORM TIDES COME EVERY YEAR IN MAY OCTOBER NOVEMBER, KILL PEOPLE AND DESTROY PROPERTY CYCLONES CANNOT BE PREVENTED BUT LIVES CAN BE SAVED IF YOU DO NOT IGNORE CYCLONE WARNINGS :
1. LISTEN TO RADIO WEATHER BULLETINS REGULARLY.
2. INFORM ALL YOU MEET WHEN YOU HEAR CYCLONE WARNINGS. DONOT SPREAD RUMOURS.
BEWARE CYCLONE
CYCLONES WILL COME AND GO. WE WILL SAVE WHAT CAN BE SAVED AND THERE SHALL BE NO LOSS OF LIFE.
3. MOVE TO STRONG BUILDINGS, HIGH MOUNDS OR INLAND PLACES AWAY FROM COAST.
4. MOVE YOUR CATTLE.
5. CUT CROPS READY FOR HARVEST AND STORE THEM IN HIGH PLACES.
6. REMOVE DEBRIS AND LOOSE OBJECTS FROM OUTSIDE LEST THEY FLY WITH WIND AND KILL.

Il faut préparer des populations menacées aux situations de catastrophes, leur enseigner les précautions et les mesures à adopter dans de tels cas.

diminuer les dommages et préserver les vies humaines, on peut alors définir et développer un plan d'actions multiformes dont les effets peuvent être à court ou à plus long terme.

L'une des priorités pour les pays en voie de développement dans la décennie, est précisément d'élaborer et d'adopter un tel plan. La question est de savoir comment le faire et avec quels moyens.

■ Le cadre thématique présenté dans le rapport du groupe ad hoc de préparation de la Décennie Internationale peut servir de base à l'élaboration de ce plan. Il est valable quel que soit le pays et peut s'appliquer à tous types de désastres naturels.

Les activités que propose un tel plan, du fait de leur nécessaire intégration, sont à mener en parallèle. On peut néanmoins répartir leur lancement et leur mise en oeuvre en plusieurs phases. Il faut rechercher et définir celles qui nécessairement se situent dans la première partie du plan. Pour les pays en voie de développement, ces activités prioritaires doivent obéir aux conditions suivantes :

❒ pouvoir avoir des résultats probants et rapidement acquis dans la réduction des effets des catastrophes naturelles.

❒ ne pas exiger des moyens financiers et techniques trop importants.

❒ garantir la poursuite et le développement normal du plan à l'avenir.

Pour chacun des pays concernés, et pour chaque type d'aléa, faire l'analyse d'un plan-type permettra d'identifier les actions prioritaires et de proposer les mesures nécessaires au soutien de ces actions.

■ L'élaboration d'un plan global de réduction des risques, la détermination du programme d'actions et le choix de celles qu'il faut entreprendre rapidement, nécessitent que soit connue, au préalable, la situation de chacun des pays considérés en ce qui concerne le niveau de prise en charge de la réduction des désastres naturels qui le menacent.

Il paraît indispensable que, dès le début de la décennie, et même avant son démarrage, *un "inventaire" complet et exhaustif* soit établi qui permette :

❒ de préciser les zones menacées et le degré de menaces.

❒ d'apprécier les capacités du pays à faire face aux catastrophes éventuelles.

❒ de connaître les dispositions et les moyens déjà mis en place dans le pays.

❒ de déterminer et d'évaluer ce qu'il y a lieu de faire pour améliorer la gestion et la réduction des risques naturels dans le pays et/ou dans les zones menacées.

Les actions qui pourront alors être entreprises au niveau national, et même au niveau régional à partir de cet "inventaire" de la situation actuelle, auront l'avantage d'être identifiées et évaluées de manière précise dans la mesure où elles découleraient d'une bonne connaissance des capacités réelles et des besoins des pays.

Un autre avantage de l'évaluation de départ, est que l'on pourra à périodes régulières procéder à une appréciation de ce qui aura été fait, de ce qui reste à faire et, en même temps, de l'efficacité des mesures prises.

Ce travail préliminaire s'impose à tous les pays menacés par des désastres naturels. Mais les pays en voie de développement n'ont pas les capacités suffisantes pour le faire par leurs propres moyens. Ils devront faire appel à l'expertise et à l'assistance des pays plus avancés afin de développer leurs capacités nationales.

Voilà un domaine dans lequel la coopération internationale devra se manifester dès le début de la décennie. Il est proposé que parmi les premières activités de la Décennie Internationale soit menée, sous l'égide du Comité Directeur de la Décennie, une *étude de la situation* de tous les pays membres, et notamment des *pays en voie de développement.*

Cette entreprise demandera l'élaboration d'un guide méthodologique et d'un modèle commun d'évaluation, la participation active des pays concernés, celle des agences spécialisées de la famille des Nations Unies, et enfin l'assistance technique et financière de certains pays ou groupes de pays.

■ Cette évaluation de la situation pré-décennie peut fournir un moyen de mesure de la réalisation des objectifs poursuivis par la Décennie Internationale, lors des évaluations de milieu et de fin de période.

■ L'autre intérêt important dans l'étude de la situation actuelle, est celui de déterminer les *travaux urgents* à réaliser pour la protection des hommes et des biens dans des régions pauvres et particulièrement menacées. Il s'agit, par exemple, des grands travaux de génie civil dont l'importance, la difficulté et le coût dépassent les moyens des pays de ces régions et qui ne peuvent être réalisés que grâce à la mobilisation de l'aide internationale.

Un tel programme de travaux pourrait constituer une des grandes priorités de la Décennie Internationale pour la réduction des désastres naturels.

■ Le phasage dans le temps des activités que doit contenir un plan

national de réduction des risques naturels est différent selon le niveau de développement et les moyens respectifs des pays. Pour un pays en voie de développement qui, *hypothèse extrême*, n'a encore rien entrepris dans la lutte contre les catastrophes, il faut distinguer trois phases successives d'activités :

Première phase :

a) création et organisation d'un plan d'interventions et de secours en cas d'urgence (nombre de pays ne disposent d'aucune organisation dans ce domaine).

b) information du public sur les aléas, éducation des populations menacées afin de les préparer aux situations de catastrophes et leur enseigner les précautions et les mesures à adopter dans de tels cas.

c) mise en place de systèmes d'alerte et d'avertissement compatibles avec la culture et avec la technologie disponible dans le pays.

Deuxième phase :

a) préparation à la gestion post-catastrophes - plans de reconstruction et de retour à la vie normale - restauration des activités économiques.

b) réduction de la vulnérabilité :

- ❒ plans d'occupation du sol, règlementation d'occupation des zones dangereuses, règlements d'urbanisme et plans d'aménagement du territoire intégrant la réduction des risques.
- ❒ codes et normes de construction.
- ❒ prise en compte de la réduction des risques dans la planification économique nationale.

Troisième phase :

a) mise en place des systèmes et de réseaux d'observation, de mesures et de surveillance des phénomènes.

b) développement des études et des évaluations des aléas naturels, cartographie - microzoning.

c) développement des centres d'études et de recherches dans le domaine - formation de spécialistes et de scientifiques.

Cet essai de programmation dans le temps de la mise en oeuvre des activités d'un plan de réduction des risques, pour autant approximatif et discutable qu'il soit, permet d'ordonner quelque peu les actions prioritaires à mener dans les pays qui jusqu'à présent ne disposent d'aucune organisation, ni de moyens de combattre les effets des catastrophes naturelles.

Il est bien évident que le schéma présenté ci-dessus doit être adapté aux conditions réelles et aux capacités de chaque pays, et modifié en conséquence. Cependant, les pays en voie de développement ont tous, à des degrés différents, les mêmes besoins pour mener à bien toutes les activités complexes et multiformes de leur plan de réduction des risques. Certains de ces besoins sont à satisfaire de *manière prioritaire* dans les pays en voie de développement.

Ils concernent :

- ❒ les moyens d'information du public et de communications.
- ❒ les technologies et les méthodologies utiles.
- ❒ le nombre de spécialistes et de chercheurs nationaux.
- ❒ les capacités de financement.

a) Information et communications

La prévention et l'atténuation des catastrophes naturelles dépendent de la participation active des populations qui doivent être parfaitement informées des dangers, de leur nature et de leur importance, de même qu'elles doivent connaître les mesures prises par les autorités pour leur protection et les initiatives à prendre en cas de sinistre. Le développement des moyens d'information du public et le rôle des média doivent être organisés et intensifiés.

Priorité doit être consacrée *aux moyens de communications* pour alerter, prévenir, conseiller les populations lors de catastrophes mais aussi pour assurer les liaisons nécessaires aux opérations de secours et d'intervention.

b) Technologies et méthodologies

Les plans de réduction des risques naturels mettent en oeuvre, dans tous leurs segments, des méthodologies et des techniques à l'efficacité prouvée et mises au point dans certains pays.

Le transfert de ces technologies qui éviterait des années de tâtonnements et surtout bien des pertes aux pays en voie de développement, devra être organisé et facilité par la Décennie Internationale. Des programmes régionaux de coopération dans le domaine de la réduction du risque sismique peuvent servir de modèles. (Exemple : *le Projet Méditerranéen pour la réduction des risques sismiques, financé par le PNUD et le gouvernement italien, exécuté avec l'UNDRO, basé à Gênes.*

c) Spécialistes et chercheurs nationaux

Dans ce domaine aussi, la coopération internationale doit se manifester pleinement, en particulier la formation des *spécialistes*

(suite à la page 21)

Natural Disasters and Insurance/Reinsurance

by Dr. Gerhard Berz

Increase of natural disasters

Great natural disasters, i.e. those exceeding the economic capacity of the affected region and requiring national or international assistance, have increased dramatically in number and scope over the past few decades. This has been proved by a statistical analysis of comprehensive loss data collected by Munich Re and presented in the second edition of its World Map of Natural Hazards. On average, from the 1960s to the 80s, the graph shows a five fold increase in frequency, an augmentation of total economic losses by a factor of 3.3, and a rise in total insured losses by a factor of 5.8.

One reason for the rise in the number of natural catastrophes is their considerably higher hit rate. This is due to the continuing growth of the world population, the increase in building density caused by the growing concentration of people and economic assets in urban areas, and by an almost global migration of populations into coastal regions that are generally more highly exposed to natural disasters. Industry also frequently develops in regions that are subject to natural hazards, without the appropriate preventive measures being taken.

Climatic Change

The other potentially more frightening reason for the increase in natural catastrophes is that meteorological phenomena appear to be increasing, although this cannot yet be statistically proved. There are strong indications of global warming due to the man-made greenhouse effect: 1988 was the warmest year in 130 years, and six other years of the 80s recorded a global mean temperature in excess of any previously measured average.

At the same time, the temperature of the oceans has been rising on a broad front. In the Pacific, for example, the typhoon breeding area has increased by roughly one-sixth over the past 20 years. Hurricanes "Gilbert" and "Hugo" could well be manifestations of increased ocean warming.

In connection with this article, the Munich Re has kindly agreed to the attached reproduction of its World Map of Natural Hazards.

Global forecasts of future developments predict that the mean global temperature will rise about 1.8°C by the middle of the next century, if the greenhouse gas concentration does not continue to increase at its present rate, and by as much as 5°C if it does. Forecasts of the rise in the sea level are even more wide-ranging - from 30 cm to as much as 1.5 m by the middle of the next century.

The impact on the insurance and reinsurance industry will, of course, be strongly felt.

The number and intensity of atmospheric catastrophes will increase. Tropical storms will extend towards the poles, i.e. towards western Europe as well. More water vapour in the atmosphere will mean heavier rainfall, more serious floods and greater numbers of thunderstorms, hailstorms and tornadoes. The coastal regions will see far more storm surges, particularly where a rise in the sea level and a higher frequency of storms coincide.

Agricultural and forestry conditions will change. In currently

World Map of Natural Hazards

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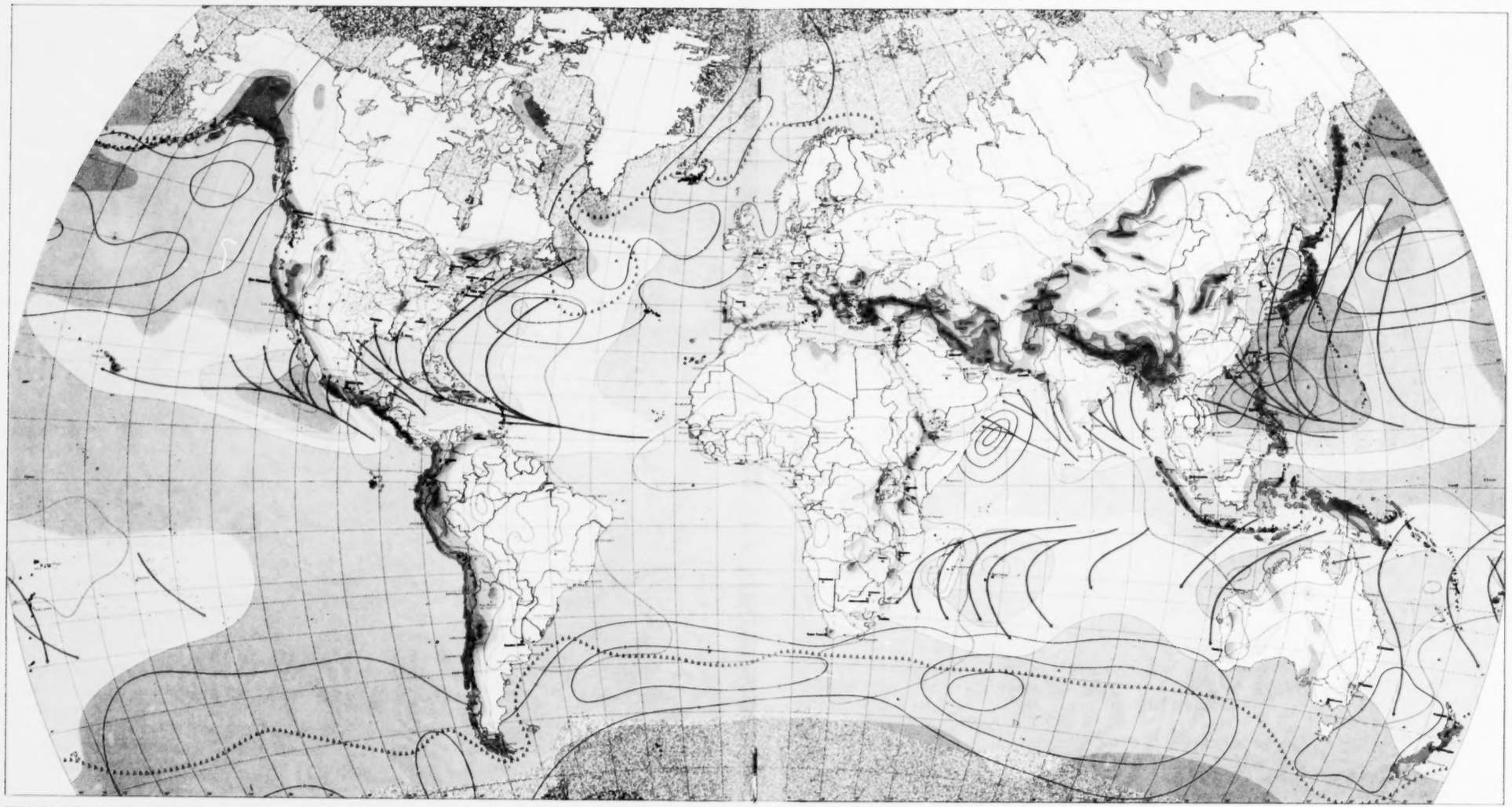
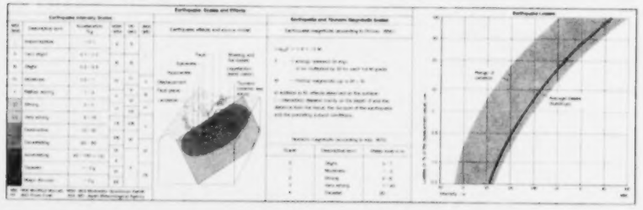
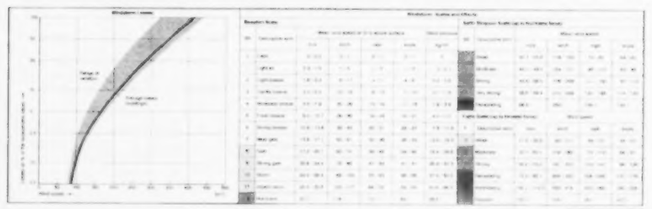
© 1988, 2nd revised edition
Münchener Rückversicherungs-Gesellschaft
Königinstraße 107, D-8000 München 40
Federal Republic of Germany
Printed in the Federal Republic of Germany
Order number 1161-V-e
Cartography and production:
JRO Kartografische Verlagsgesellschaft mbH, Munich



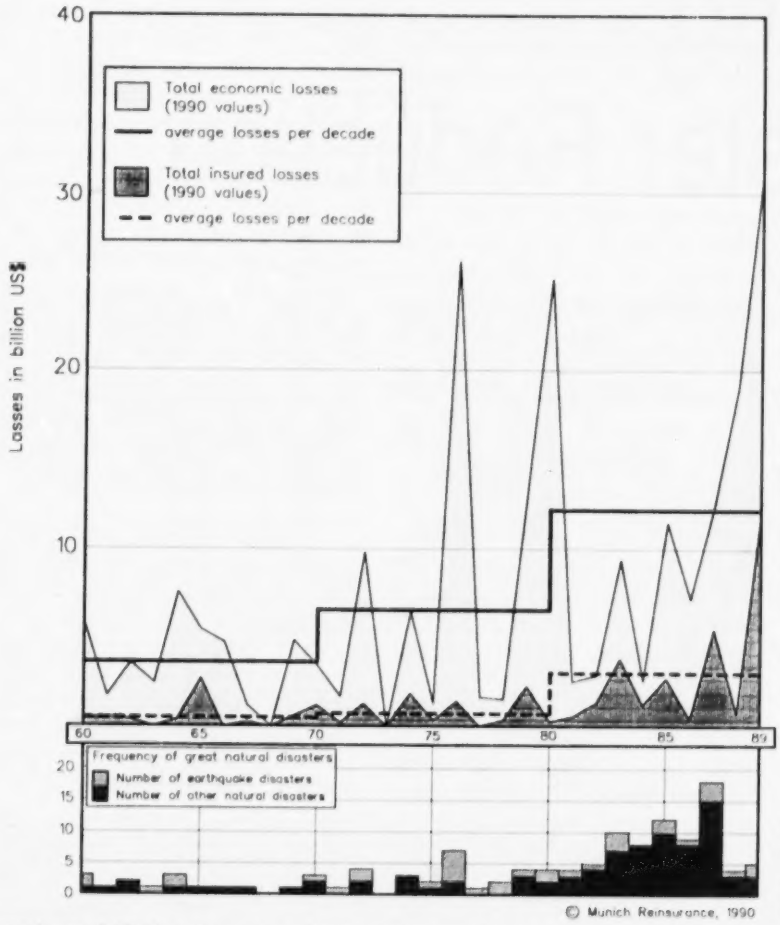




Courtesy of the Munich Re for the International Decade for Natural Disaster Reduction - IDNDR.

The boundaries and names on this map do not imply official endorsement or acceptance by the United Nations.

Great Natural Disasters 1960 - 1989
Frequency and Loss Extent



moderate latitudes they may change for the better, in others, for the worse. This will mean more frequent and serious droughts. Our forests, sick as they already are, will further suffer as a result of higher temperatures and recurrent droughts.

Even though a reliable forecast is still impossible, it is certain that any transition to a new stable climatic situation - should it occur at all - will be accompanied by an exceptional accumulation of meteorological anomalies that will generally give rise to catastrophes. In a nutshell, therefore, it is more likely than not that the future will present the natural catastrophe problem to the insurance industry in a new dimension.

Insurance/Reinsurance

The insurance against natural disasters is still not satisfactory as far as insurance technique is concerned. In many if not most markets, natural disaster insurance rates range from inadequate to grossly inadequate to non-existent. Cover is still frequently thrown in free of charge. Accumulation control for earthquake, led by the more heavily-affected reinsurers, has been achieved in many countries, but not in all. For windstorm and flood, accumulation control has only been introduced in a few markets.

Under the circumstances, it is imperative that the insurance and reinsurance of disaster losses are immediately addressed in a more appropriate way.

Although it is easy to say what needs to be done, it may not be so easy to introduce in practice. Natural disaster coverage should not be thrown together with other covers. It should be underwritten specifically; be priced specifically, based on scientific data; be separately controlled; and maybe even limited by event and in the aggregate per year (in addition to perhaps coinsurance and deductibles carried by the insured), regardless of whether the cover is given by separate endorsement or in a packaged policy.

There are good examples from many markets that this approach is not only feasible but the only responsible way to deal with these perils in the interest of the insured.

Since the loss prevention measures to be developed under the IDNDR will have positive long- and medium-term effects on loss exposure, the insurance industry will benefit from this programme. At the same time, insurers can exert significant influence on the insured through their rating structure and thus encourage them to take the initiative in introducing loss prevention or loss minimization measures or where an extreme situation makes insurance protection prohibitively expensive or not available at all, even motivate them to abandon highly exposed regions.

Dr. Gerhard Berz is Head of the Natural Hazards Research Group at the Munich Reinsurance Company, Munich, Federal Republic of Germany.

Integrated Disaster Reduction

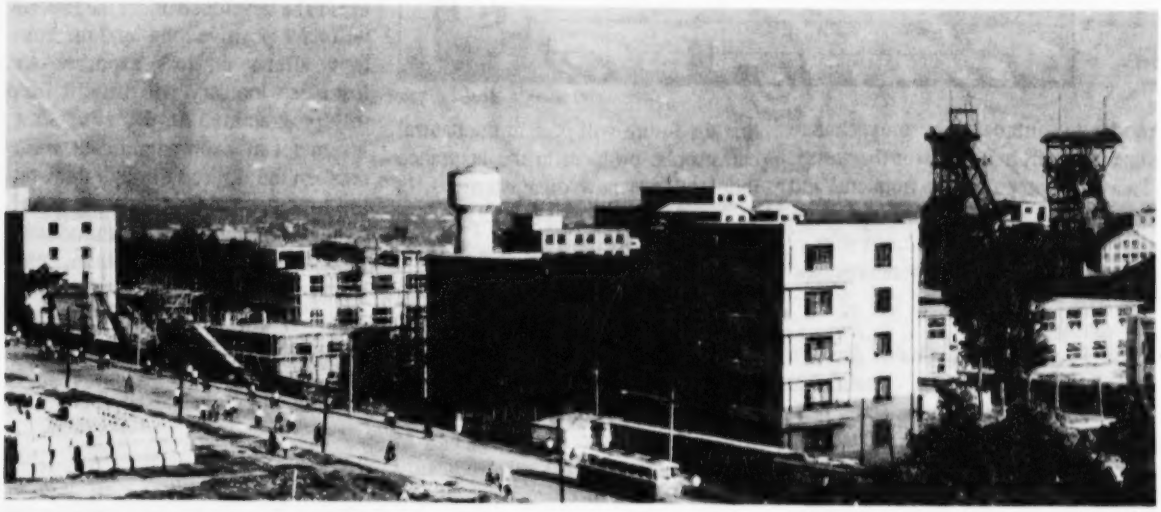
by Carlo Pelanda

The full success of the IDNDR initiative depends on the possibility of integrating disaster reduction policies with policy areas which already rank high in the political priorities of both developing and developed countries.

Development

For many developing countries the possibility of building a systematic policy of disaster reduction is jeopardized by a structural absence of economic resources. This problem creates a situation in which the demands on basic resources do not leave room for specialized prevention policies against disasters. This problem finds possible solutions only if the disaster prevention policy can be integrated in the general policies of development, nationally, and if a regional co-operation regimen (based on a "substantial" international umbrella) can be built. For instance, if a national policy of risk reduction against floods in a developing country is organized within an integrated program of global restructuring of a given area (i.e. where the policies of natural resources, housing, urban settlements, industrialization, agriculture, health, transportation infrastructures, etc. are integrated) then the specific reduction of this risk can be achieved as "a side effect" of a general modernization program. Moreover the specific (structural) flood prevention policy (dams, etc.) can be connected with a network of parallel actions of modernization. To sum up, disaster reduction policies in the developing countries have to be connected with general programs of modernization and development.

Furthermore, for reasons of scale economy and of structural pre-conditions of operational capacity, these kind of policies have to be "regionalized", in terms of area of intervention, and "internationalized" in terms of mobilization and organization of resources. Fragmented and sectorialized disaster reduction policies in the developing countries cannot be effective.



Li Yaodong

Disaster reduction in developing countries has to be connected with development. A part of the newly-built Kailuan Colliery after the Tangshen earthquake in China.

Environment

In many countries the institutional architecture of disaster reduction policies is not connected with the environmental policy system. This problem jeopardizes (mostly for the industrialized countries) the possibility of functionally merging the institutional systems and resources for the environmental and disaster prevention policies. The institutional function of disaster policy should be merged with that of the protection of the environment in general. In fact both policies imply, in substance, the setting up of small and large-scale civil engineering projects for rural and urban (re) structuring and maintenance (with the support of common technologies). Institutionally this "merging" is crucial in order to make possible the "routinization" of the disaster prevention policies by connecting them with the eco-policies, in general, i.e. the possibility to include "extraordinary" events in the ordinary policy systems and relative priorities.

Moreover it means that "remote prevention" (and its "structural" relevance) can be included in the institutional system of civil security, increasing its "functional weight" and roles, i.e. its possibility to be part of an international network of integrated functions.

Disarmament

Another problem is constituted by the strategic profile of many technologies which serve to build a capacity of control on the ecosystemic precesses (satellites, remote sensors, telematics, etc.). The international system can operate only if there is a distribution of such technologies.

An international IDNDR regimen shall deal with the problem of the "demilitarization" of critical technologies and with a difficult system of guarantees in the areas characterized by intra regional conflicts.

Initially this problem can be solved pragmatically, by initiating examples of positive and symmetric co-operation when possible. In the future, an international treaty (and a new role of the United Nations should regulate the problem. In any case the IDNDR should be an opportunity for converting some military technologies into "international civil security" systems. This seems possible today on the basis of the new trend in east-west relations and in view of the industrial problems of continuing the production and sale of "critical technologies", at a time when military defence budgets are likely to be reduced.

■

Carlo Pelanda is Professor of Systems Theory, LUISS, Rome, Italy; Associate Director of the International Laboratory for Sociopolitical Ecology (INTERLAB), University of Georgia, Athens, USA and Member of the former International Ad hoc Group of Experts, IDNDR.

Les Priorités de la Décennie

(suite de la page 17)

d'intervention en cas d'urgence, par l'attribution de bourses, l'organisation de stages de formation et de conférences d'information.

d) Problèmes de financement

Les coûts des mesures de préparation aux catastrophes éventuelles sont très faibles comparés aux pertes occasionnées par les catastrophes. Ils demeurent encore élevés pour les possibilités de nombreux pays en voie de développement. Il nous paraît nécessaire que des possibilités d'aide et de *financement favorable* soient offertes à ces pays, pour la *mise en oeuvre de leur plan de préparation* aux catastrophes et de réduction des risques. Des exemples existent qui peuvent guider dans la recherche de solutions qui semblent plus faciles à trouver lorsqu'il s'agit de programmes établis à l'échelle régionale. (Exemple : Projet PAMERAR financé par le FADES) (Fonds arabe de développement).

La *réalisation des ouvrages de protection* (digues, par exemple) requiert d'importantes sommes d'argent. Mais leur financement est en général difficile à obtenir auprès des institutions financières internationales, et le restera tant que les critères de rentabilité habituellement utilisés demeureront ce qu'ils sont.

Il apparaît nécessaire que très tôt dans la décennie, et sous l'égide du Comité directeur de la Décennie Internationale, soit élaboré un rapport proposant et recommendant des critères, des normes d'évaluation et des conditions de financement, spécifiques aux investissements destinés à la protection des populations et de l'économie contre les catastrophes naturelles et à la réduction de leurs effets.

***

Au terme de cet essai d'identification des priorités de la Décennie pour les pays en voie de développement, aucune entreprise nationale de réduction des risques naturels, aussi bien conçue et définie qu'elle soit, ne peut réussir sans l'adhésion et la participation active des populations et des responsables politiques.

■

M. Mohamed Benblidia est ingénieur hydraulicien et Directeur général de l'Agence nationale pour l'aménagement du territoire, Algérie. Il est membre du groupe ad hoc d'experts de préparation de la Décennie internationale pour la prévention des catastrophes naturelles.

Counter Disaster Activities in Australia

by Commodore C. J. Littleton

As a continent spanning some 34 degrees of latitude, Australia is subject to a wide range of natural hazards. This was very apparent during a period in the late 1960's and early 1970's which became known as "the disasters years". The nation was struck by a series of severe fires, floods and storms which caused governments at Federal, State/Territory and local level to upgrade counter disaster capabilities. Steps taken included formation of the Natural Disasters Organization at Federal level and formation of State/Territory Emergency Services, mainly staffed by volunteers who provide support for statutory emergency services (police, fire, ambulance etc), at State/Territory and local government level. There was also a general upgrading of the capabilities of the statutory emergency services. The timeliness of this effort was apparent after the isolated city of Darwin was destroyed by Tropical Cyclone TRACY on 25 December 1974. Relief work, temporary relocation of population, and reconstruction were enhanced by the newly created and trained organisations.

Since 1974, Australian counter disaster capabilities have been continuously upgraded and are now considered both efficient and effective. Nevertheless there is still room for improvement. Australia is also willing to assist other nations in its geographical region, particularly those in the South West Pacific, in developing their disaster preparedness capabilities. Consequently the Australian Government strongly supports the IDNDR goals and objectives as exemplified by UN Resolution 44/236 of 22 december 1989.

Although a precise Australian programme for the Decade has yet to be defined, there are a number of activities already in hand. These include:

- ❒ Formation of an Australian IDNDR Co-ordination Committee chaired by the Director General of the Natural Disasters Organisation. Subcommittees at State/Territory level and others for special purposes will also be formed.

- ❒ A national launch of the IDNDR is being conducted over the period 11-13 February 1990 at the Australian Counter Disaster College. Approximately fifty representatives of groups with expected IDNDR interest or involvement will attend.

- ❒ Production of a series of practical Australian Emergency Manuals is being undertaken. As a contribution to the IDNDR the content of these manuals will be made available to all nations. Small quantities of the manuals can be supplied to developing nations, while the material contained in them may be reproduced by any nation on request, free of copyright restrictions, provided suitable acknowledgements are made. "Disaster Rescue" is now printed. The following are being prepared:

  - Communications
  - Land Search Operations
  - Four Wheel Drive Vehicle Operation
  - Flood Rescue Boat Operation
  - Chain Saw Operation
  - Storm Damage Operations
  - Vertical Rescue (eg Cliff Rescue)
  - Training and Instructional Techniques

Additionally, the Australian Government has already embarked on a wide range of initiatives of direct relevance to the IDNDR. These include:

- ❒ Pacific Disaster Preparedness Programme
- ❒ Decade of Land Care
- ❒ Planting of one billion trees by the year 2000
- ❒ Improved flood warning systems
- ❒ Establishment of a network of Pacific Tidal Monitoring Stations
- ❒ Training of overseas scientists

The level of Australian Government commitment to the IDNDR is evident from the prominent role of the Prime Minister in projects dealing with the "greenhouse effects" and climatic changes, and by his support of the IDNDR.

Commodore Littleton is the Director General of the Australian Natural Disasters Organization.

Note: Parties interested in Australian Emergency Manuals should write to: PO Box E33, Queen Victoria Terrace PARKES ACT 2600 Australia.

Consultants and the Decade

by James Lewis

The United Nations International Decade for Natural Disaster Reduction (IDNDR) has arrived at a time of unprecedented concern and activity in environmental issues. Consultants could be instrumental in bringing together initiatives for hazard management, for a near future when climate change is expected to bring, for example, increased incidence and severity of tropical cyclones and flooding. It is not too soon to extend training and expand policy formulation on behalf of these emergent issues; where institutions may not be able to respond quickly, consultants can and are doing so.

There are consultants with expertise of one sort or another capable of dealing with every aspect of disaster response; pre-disaster planning, disaster prevention and vulnerability reduction; disaster mitigation; disaster relief; rehabilitation and reconstruction.

Engineers for roads, harbours, dams, water and electricity supplies, and communications; architects for settlement planning and building construction; environmental, emergency, nutritional and mental health specialists; economists; geographers; sociologists; agriculturalists; environmentalists; logistics experts; preparedness advisers; trainers and teachers ...

Working either as members of large firms, as small teams, or as individuals, consultants of any discipline or expertise, singly or in combination, are able to respond to any aspect of need anywhere in the world.

Needs may be in the field, or for information, advice or policy recommendation for institutions or organizations. In their variety and flexibility, consultants can adapt quickly to these needs and can assist temporarily overstretched organizations. Wide-ranging experience, expertise and adaptability makes consultants themselves a medium for transfer of technology between countries, disciplines, groups and organizations. It makes them the most appropriate people to organize and to participate in training programmes and demonstration projects. They can advise on where and in what form these should be held and what gaps have to be filled.

Consultants need an invitation, however, in order to act. Opportunities for exchange and generative fusion of ideas and initiative between consultants and organizations are rare and should become more frequent. There are hitherto untapped resources of creative ideas and energy available immediately to perceptive agencies and organizations.

Consultants' variety of expertise and experience might be made optimum use of by liaison between agencies and organizations, both non governmental and multilateral. For example, UNEP, UNCHS (Habitat), UNHCR, WHO and, of course, UNDRO, could be among the multilateral hosts to respond to the hitherto untapped body of consultant resource relevant and applicable to environmental hazards.

UNDRO Photo

Here, in Chad, the UNDRO Co-ordinator examines a civil engineering project carried out under the supervision of consultants.

James Lewis of Datum International is a consultant in environmental hazards and human settlements. He is Specialist Adviser to the British Consultants Bureau Conference "Disaster Relief and Mitigation" which has marked the start of the IDNDR in London; current Chairman of the International Hazards Panel and Member of the Earthquake Engineering Field Investigation Team (EEFIT), and consultant to the Commonwealth Secretariat Expert Group on Climate Change and Sea Level Rise. ■

Earthquakes and the Insurance Industry

- an invited comment

Seismologists tell us that a major earthquake will occur in the United States within our lifetime. Although it is commonly believed that the next "big one" will occur along one of several fault lines in California, many geologists contend that the next catastrophic earthquake could strike the densely populated, highly industrialized, and poorly prepared eastern United States.

Despite the difficulties associated with predicting earthquakes, scientists are developing a reservoir of knowledge about seismic risk. All 50 states are vulnerable to the hazards of earthquakes, and at least 39 of them are subject to major or moderate seismic risk. According to the Earthquake Engineering Center at Stanford University, 70 million Americans are exposed to a "severe earthquake risk, with an additional 120 million people exposed to a moderate risk." The Federal Emergency Management Agency, the U.S. Geological Survey, the National Science Foundation, and the National Institute of Standards and Technology - the four principal agencies responsible for the National Earthquake Hazards Reduction Programme - have similarly declared that "damaging earthquakes have occurred in almost every region of the United States" and that "a catastrophic earthquake poses perhaps the greatest natural hazard faced by the nation."

Commenting in its recently released study of the economic impacts of a major earthquake in a densely populated area, Stewart Economics, Inc., stated:

The direct and indirect damage would be immense. The concentration of property values and sophisticated equipment characteristic of modern American cities make any analogies to the past events quite unreliable.

Much local activity would come to a halt, either from direct damage or lack of essential services. The whole region would suffer losses of employment and income. But more than the victim area would be hurt.

No region of the country is completely independent of other regions. Individuals, businesses, and governments are linked together by trading relationships and financial relationships. Specialization and interdependency are the hallmarks of a modern financial economy.

Financial markets link the country and the world. The Earthquake's physical damage would immediately be transmitted through financial markets in lower value of assets, such as securities, loans, and mortgages. Holders of those assets might be badly hurt and have to cut back their own operations.

The Earthquake Project, an insurance industry coalition that addresses earthquakes issues, has quantified insurance industry losses for major earthquakes along the northern San Andreas and Newport-Inglewood faults in California. Estimated insurance industry losses are shown as follows.

	($ Billions)	
	Northern San Andreas	Newport-Inglewood
Residential Shaking	$3.4	$2.3
Commercial Shaking	8.1	11.2
Fire Following Quake	11.6	24.3
Workers Compensation	2.4	4.5
General Liability	5.5	10.1
Total	31.0	52.4

Editor's note: The above article was written prior to the occurrence of the October 17, 1989, Loma Prieta, California earthquake.

American Red Cross Society

Damage caused by the Loma Prieta, California, earthquake, October 1989.

These estimates are net of applicable deductibles and display the anticipated insurance industry losses under existing coverages.

Before deductibles, estimated losses would be $37.4 billion along the northern San Andreas fault and $60.4 billion along the Newport-Inglewood fault. Claim amounts for the residential and commercial shaking losses and fire losses include allowances for additional living expenses and debris removal. These estimates also include the insurance industry's operating expenses to process the enormous number of claims that would occur in such a disaster and the inflated costs of repairs or replacements. Such costs have increased the loss amount by 30%. However, they do not include estimates for insured business-interruption losses or losses due to toxicity and pollution (insured or uninsured) caused by an earthquake.

Losses arising from damages to the infrastructure, including bridges, overpasses and underpasses, water and sewer systems, dams, electrical systems, fuel lines, roadways, communications networks, airports, military installations, and government structures, must also be considered. Further, the impact of higher unemployment, lower tax revenues, reduced productivity, and restricted industrial production must be added. These losses can be expected to strain the economy, both in the area where the earthquake occurs and across the U.S., and could equal the losses claimed for buildings and their contents. And finally, any estimation of total loss must include the cost of governmental (federal and state) disaster relief programmes.

Little doubt should remain about the potential for, or the staggering costs resulting from, a catastrophic earthquake. There is a real probability that the U.S. will experience a major earthquake within the next 20 years, and that the costs of such a catastrophe will exceed $100 billion. The financial burdens of such an event will critically impair the viability of the property-casualty insurance industry.

(continued on page 27)

Counter-Disaster Education, Public Information and Training for the IDNDR

by G. N. Ritchie

"I have six honest serving men. They taught me all I know. Their names are
What *and* How *and* Why *and* Where *and* When *and* Who".

Rudyard Kipling

The above quotation can be suitably applied to education, public information and training in the context of the International Decade for Natural Disaster Reduction, IDNDR.

The *Who* and the *Where*

There are three elements in the *Who*:

- Policy makers in government, the news media, the NGOs and the communities.
- Professionals with responsibilities for pre-disaster planning and response management.
- Community leaders.

Understanding of the nature, value and cost/benefit of disaster prevention, preparedness and effective response management must be created in those with responsibility for policy making and decisions. But Government must give the lead and provide the stimulus upon which all action depends.

Creation of this understanding will result in policies and plans, which are the responsibility of professional planners and managers. It is important to ensure however that counter-disaster plans become an integral element of all government planning and administration, in all departments and, at all levels, and that these plans are developed from the bottom up and include the important role of the NGOs.

In consequence this aspect of professional training must become multi-departmental and organizational. This requirement is best met by introducing it as an ongoing element of the programmes of national and international staff colleges, institutes and training centres where administrators, government specialists, police and armed service officers are trained. To ensure that all come to understand the responsibilities, dependencies and constraints affecting one another's operations, this is probably best done by an exchange of students between colleges where disaster management is studied as happens in many military staff colleges at present.

At the community level we must seek to create commitment and self reliance through public information, awareness and training programmes appropriate to the culture, societies and economic circumstances of these communities.

Within the *Who* of training there is one other essential group. If counter-disaster training programmes are to be introduced at national and regional levels, training of trainers must be initiated. This will create the multiplier effect and should be one of the priority tasks undertaken by disaster preparedness centres in support of the IDNDR: first to train trainers for, and then to provide support to, national and international colleges in disaster-prone countries and regions - the *Where* of counter-disaster staff training.

The *What* and *How*

Although important elements of the programmes mounted by training institutions such as the Asian Disaster Preparedness Centre and the Cranfield Centre, are based upon relevant research, if these programmes are to be successfully exported to colleges and training centres in Asia, Africa, the Pacific and the Caribbean regions, there is an urgent need to review and develop the syllabuses and training methodologies presently in use.

In principle, the syllabuses of counter-disaster staff training programmes address:

- ❒ Threat and vulnerability analysis
- ❒ Prevention, preparedness and mitigation planning
- ❒ Disaster management
- ❒ Logistics
- ❒ Environmental, water resources, health and hygiene management
- ❒ Relationships between disaster and development.

Programmes both at the professional and at the community levels must be designed to draw on abilities and experience through interactive learning programmes and skills training. The aim must be to develop real working capabilities and skills, not theoretical knowledge or generalized discussion of problems and issues.

The *What* and *How* of counter-disaster training must achieve this aim, if the IDNDR is to provide practical results and meet its objectives.

The *Why* of counter-disaster training and community self-reliance is self-evident... The *When* is *Now*.

Counter-disaster staff training is likely to provide one of the most cost-effective approaches to the Decade.

❒

G.N. Ritchie is the Director of the Cranfield Disaster Preparedness Centre, Royal Military College of Science, Shrivenham, United Kingdom.

Earthquakes and the Insurance Industry

(Continued from page 25)

The nation's economy has developed in a manner that involves insurance in virtually every aspect of our daily experience. Seventy-five percent of the property-casualty insurance bought in the United States is mandated by statute or business practice. Thus, society is dependent upon the availability of insurance.

The "surplus" from American property-casualty insurance revenues, that is, the monies available after liabilities are deducted from assets, stands at approximately $100 billion. To radically reduce this surplus by one-third or one-half for claims from a single event will instantaneously impair the ability of insurers to assume further risk; insurance market dislocations would occur, and an unparalleled availability crisis will emerge.

The Earthquake Project has developed a proposal that provides for a joint government-industry insurance programme. This programme would provide for the prefunding of monies needed to meet the financial consequences of a major earthquake and substitute insurance for government disaster relief.

In a 1980 study on federal disaster assistance, the General Accounting Office declared "insurance is the most efficient and equitable method of providing disaster assistance." Insurance provides more complete compensation for damages sustained by disaster victims because it is directed at more than basic necessities. A home that is insured for disaster can be rebuilt *immediately* with the money received from the homeowner's insurance policy. Homeowners are not offered a grant or a loan that must be repaid, as they are in federal disaster assistance programmes. Moreover, the insured property owner is given additional living expenses and an amount of money, determined by the provisions of the policy, to start the rebuilding process.

Insurance provides cash payments for the victim to allocate as he or she sees fit and gives people more control over their degree of protection. Moreover, unlike disaster assistance, insurance is available to homeowners in the event of a smaller earthquake and is not dependent upon a presidential disaster declaration.

Another advantage of insurance is that it is more cost-effective to the federal government. Insurance relies on the premiums it collects from policy holders. If insurance coverage for earthquakes is made nationally available, the government will not have to spend billions of dollars in after-the-fact assistance to help homeowners and businesses get back on their feet. The government can devote its resources to rebuilding bridges, roads, communication networks, government structures, and other parts of the nation's infrastructure.

These benefits can be effectively, efficiently, and economically provided through the Earthquake Project's innovative proposal.

Eugene Lecomte
National Committee on Property Insurance (United States)

The above article first appeared in the November 1989 issue of Natural Hazards Observer, Boulder, Colorado, U.S.A.

UNIENET

Electronic Bridge to Span the Decade

by John MacNair

A Global Purpose

"Information please." This is the request expected from across the globe, as news of the Decade's promise to reduce disasters in ten years travels through the worldwide disaster management community - and beyond, to the general public.

UNIENET - the United Nations International Emergency Network - is to be one of the chief means of both providing that information on Decade objectives and activities, on national focal points and programmes, and on international workshops and symposia, and of enabling participants in the Decade to communicate cheaply, quickly and reliably on disaster management despite great distances and different time zones.

The dissemination and exchange of technical information related to assessment, prediction and mitigation of natural disasters, and on activities of the Decade so that participants can benefit from each other's experience, are at the heart of the IDNDR's strategy for success.

They are also reflected in the objectives set for UNIENET when it's first electronic message was sent from UNDRO eighteen months ago. These objectives are to make disaster management worldwide more effective and efficient by:

- increasing the capacity of organizations and individual worldwide, concerned with disaster management to obtain and exchange information of common interest, rapidly, reliably and economically, and

- stimulating the development of relationships between disaster management individuals and organizations and facilitating co-ordination in areas of common activities.

Information on the Decade

Work has begun on putting information about the Decade at the fingertips of UNIENET Members, now numbering more than one hundred and fifty in thirty countries.

At present by going "on-line" to UNIENET at any time of day or night they can find out about the forthcoming international meetings related to the IDNDR, the names and contact points of the IDNDR *Ad Hoc* Group of Experts, and the current list, status and activities of the forty-five National Committees and focal points formed so far. An example, taken at random, of an entry in this last category reads:

Jamaica

Focal point for correspondence:
Dr. Barbara Carby,
Head, Planning and Research,
Office of Disaster Preparedness,
12 Camp Road,
Kingston 5.

A National Planning Committee will be established which will consist of representatives from Government Agencies concerned with engineering, planning, the environment, public safety, emergency management, and legislation. Also represented will be the insurance sector, professional associations, the private sector, scientific institutions, and the media.

The major areas of focus will be as follows:

Identification of hazardous zones; monitoring, prediction and warning; land use and risk management; and public education and information.

Work has begun to plan for more elements specifically linked to the IDNDR programmes - for example: a historical data base of disasters; information on disaster management training facilities and possible sources of related funding support; an overview of lessons learned on various disasters; directories of specialized institutions; reports on "state of the art" and "appropriate" technology for disaster management.

Electronic Windows - Participation through Information Sharing

UNIENET's flexibility and participatory character is especially suited to service a global effort which can be expected to grow annually. "Electronic windows" - literally individual displays of information - can be made available to participants to themselves manage and present activities and resources that are of common interest - for example on current disaster situations, on the identities of national disaster co-ordinators, on forthcoming conferences and training courses, and reference materials programmes and activities relating to specific national, regional or international interests.

Already, "electronic windows" have been opened to six member organizations, in addition to the IDNDR: UNDRO, the Pan Caribbean Disaster Preparedness and Prevention Project, the Pan American Health Organization, the Asian Disaster Preparedness Centre at the Asian Institute of Technology, the Organization of American States, the United Nations High Commissioner for Refugees, and the International Council of Voluntary Agencies.

Following this model, it can be expected that other entities, notably, national IDNDR committees will also avail themselves of "windows" to keep each other up to date, with a minimum of effort, of respective objectives, plans, and activities as they develop.

It can also be expected that UNIENET's value for operational aspects of disaster management will be exploited: for example the channeling of existing early warning information of impending or occurring disasters from specialized meteorological and seismological sources through UNIENET to increasae the readiness of relief organizations, or the displaying of real/near real time information on international relief needs in function of contributions as a disaster situation evolves.

Specialized Communications Networks

The ability to communicate worldwide, even if the addressee does not have a computer, is another attractive tool available to Decade activists that are members of UNIENET. Messages, letters, documents can be sent from the originator's computer screen, to another computer, a facsimile or a telex machine. Moreover, of special value to interest groups, for example disaster managers in a given geographical region or for communications to specific communities - such as a "broadcast" message to academic centers requesting information on a research topic - standard lists of multiple addressees can be drawn up and maintained for repeated use.

Connections with Other Networks

Participation in UNIENET allows access to other networks of UN organizations also active in disaster - notably with those of UNICEF, and of UNDP - UNDRO's field representation in virtually every developing country. Furthermore, both data bases on such networks, certain commercial data bases, and news sources which can be searched with key words (such as "disaster") are also accessible. Ongoing improvements to UNIENET, and efforts to increase connections between electronic networks worldwide can be expected to make yet greater interaction possible in the near future.

The Management of UNIENET

UNIENET is a co-operative effort, characterized by contributions and exchange of information between its members, who are represented on an advisory UNIENET Board, meeting periodically in Geneva. The system is administrated by UNDRO, through an arrangement with the Telecommunications Co-operative Network, a non-profit telecommunications intermediary based in New York that provides low cost access to the facilities of a large computer located in Maryland, USA, owned by *Dialcom Inc.*

Sources of information and training (little is needed) on UNIENET are to be found at UNDRO's Collaborative Centre - the Asian Disaster Preparedness Centre at the Asian Institute of Technology in Bangkok, the Pan-Caribbean Disaster Preparedness and Prevention Programme based in Antigua, and UNDRO Offices in New York and Geneva.

So far, the costs of developing and operating UNIENET have been carried by UNDRO - with initial support from the US Government's Office for Foreign Disaster Assistance - through a pilot phase which ended in December 1989. Henceforth a scale of fees have been established with subsidization of certain categories of users.

Equipment Needed, Membership in UNIENET, and related charges

A personal computer with communications capability, communications software, and a modem (a device connecting a computer to a telephone line) are needed to work on UNIENET once the membership has been arranged. (Access is also possible through a connection to the UN International Computing Centre (ICC) in Geneva.

All organizations and individuals - public or private - interested in the objectives and activities of the Decade are welcome to join UNIENET, even on a trial basis. A form to request information on UNIENET can be found alongside this article.

There are two kinds of charges - for Telecommunications and Computer Access:

❒ The Telecommunications charges vary from country to country; relevant information can be obtained from the local telephone company which bills the user direct. These charges will include a subscription fee to the local packet switching network, and variable charges incurred for connection time on a local telephone line.

❒ The computer access charge is US $9-$5 per hour depending on the time of day or night, plus US $0.05 per 1,000 characters transmitted, and a US $10 monthly service charge. Additional features such as telex and fax transmission, and access to commercial data bases and storage of files carry surcharges.

UNIENET In Ten Years

The rapid rate of development of the information management technology on which UNIENET is based, promises opportunities for its globe-spanning electronic bridges in the next ten years that can barely be imagined now. But as in other areas of Decade activity, the challenge lies in building effectively on existing disaster management mechanisms. UNIENET is one such mechanism which can play a critical role in resolving that problem plaguing both successful Decades and successful disaster management - ***getting the right information to the right place at the right time.***

John MacNair is a freelance writer concerned with disaster management and humanitarian issues and based in Geneva.

UNIENET
The United Nations International Emergency Network

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Serious Flooding in Tunisia: Airlift of Relief Supplies

The Government of Tunisia requested UNDRO to launch an appeal for international assistance for the victims of serious flooding in the southern and central parts of the country.

The UNDRO Co-ordinator left for Tunis on Friday 26 January, on a five-day mission, accompanied by a relief co-ordination officer who visited affected areas in the provinces of Sidi Bou Zid, Kasserine and Kairouan to assess the extent of damage and the relief requirements. They witnessed the villagers' spontaneous solidarity towards the victims in rural communities. While in Tunis, the Co-ordinator chaired a co-ordination meeting at the UNDP Office, bringing together Tunisian authorities and representatives of UNFPA, UNHCR, WFP, FAO, UNESCO, WHO, donor governments, EEC and non-governmental organizations. He also met with the Ambassadors of several countries and other members of the international community to seek assistance to cover unmet relief needs.

UNDRO made arrangements to airlift 20 mt of relief supplies from its warehouse in Pisa, Italy. The plane, which left for Tunisia on 26th January, carried tents, blankets and polythylene sheets. The cost of the airlift and the value of its contents totalled approximately US $100,000. The OPEC Fund financed the cost of chartering this plane. The United Kingdom's contribution of US $50,000 is being used for local purchase of blankets, mats and clothing.

The European Economic Community made 300,000 Ecus (approx. US $360,000) available to UNDRO for the airlift of tents. The Government of Japan also financed an airlift of blankets, tents and rolls of plastic sheeting from the Japanese stocks held at UNDRO's Pisa warehouse, for a total contribution of approximately US $100,000.

More than half of the Tunisian territory has been affected by torrential rains since 21 January including the provinces of Kairouan, Sfax, Kasserine, Gafsa and Sidi Bou Zid. As several areas remain inaccessible, relief supplies could only be brought in by helicopter. Estimates at the end of January put the number of families made homeless at 9,650. Some 5,500 women and children have been evacuated to schools and mosques. Severe damage has occurred to agriculture, to roads and bridges, as well as to water, electricity and telecommunications infrastructure. Provisional government estimates put overall damage at approximately US $212 million. ■

Floods in Tunisia

Disaster Planning and Management in Algeria

UNDRO-executed project within IDNDR framework

The first major earthquake in Algeria since the El Asnam earthquake of 1980 struck the province of Tipasa, some 70 kms from the capital, at 2010 hours on 29 October 1989. The earthquake measured between 6.1 and 6.3 on the Richter Magnitude scale, and 8 on the MSK intensity scale. While an earthquake of this size causes significant damage and disruption, a larger magnitude event, especially near Algiers, would be a major catastrophe. This latest earthquake is viewed as a reminder that major seismic activity is a very real threat to the Algiers metropolitan region itself. The experience gained from this event suggests that urgent attention should be given to improving disaster preparedness and ensuring the application of preventive techniques to traditional construction.

Damage caused by the El Asnam earthquake, Algeria, 1980.

Disaster planning is not new to Algeria. For example, the disaster planning and management that was tested during the El Asnam earthquake proved to be quite effective. But such planning needs to be a continuing process and disaster preparedness requires a constant public awareness effort.

It is for this reason that UNDRO is executing a project within the framework of the International Decade for Natural Disaster Reduction that will:

- assist in developing an improved approach to the design and construction of aseismic low-income housing, particularly for builders working in the traditional sector;
- evaluate earthquake disaster response, with special reference to experience gained from the recent emergency in Tipaza, and propose a strategy to improve such response;
- raise public awareness of earthquake risk as well as identify a strategy to maintain such awareness, including the publication of information material.

The project is to serve as an example of the type of concrete operational activity to be undertaken during the initial phase of the International Decade for Natural Disaster Reduction. Its implementation has been made possible through generous financial support by the Government of Denmark. ■

UNDRO at Work

RELIEF: MOBILIZATION AND CO-ORDINATION

■ **Angola:** UNDRO is currently involved in the computerization of the Angolan Technical Unit for Emergeny Assistance (UTA-E), the government focal point for the monitoring of emergency relief operations in Angola. The project, financed by the United Kingdom and Sweden, includes the purchase of computer equipment, the provision of an expert consultant to oversee the project and the training of local personnel. The project will commence in February 1990 and will be completed in July 1990.

■ **Lebanon:** A short-term project for non-food assistance, worth US $773,000 has been completed in January 1990. About 100,000 persons in Lebanon have already benefited from a shipment of blankets, mattresses, pillows, heating stoves, kitchen sets and hurricane lamps. A cleaning and rodent control campaign for the whole of Beirut is also being implemented in the framework of this project, which began in November 1989 with an EEC contribution.

Implementation of another project for the emergency repair of the domestic water supply system in Greater Beirut, worth over US $1 million, started in January 1990. The project financed by the EEC under an agreement with UNDRO, is being carried out by UNICEF.

The total value of contributions for Lebanon in 1989, as reported to or given through UNDRO, totalled just over US $100 million.

■ **Madagascar:** Cyclone "Alibera" struck Madagascar on 31 December 1989/1 January 1990, causing serious damage in several provinces, especially Fianarantsoa located in the south-eastern part of the island. By 24 January, it was reported that casualties totalled 46 dead and that 55,346 people had been made homeless.

The Government of Madagascar appealed for international assistance on 19 January, and UNDRO immediately made available an emergency grant for the purchase of urgent relief materials. The office issued two situation reports and will continue to keep the international community informed, as required.

■ **Romania:** On 11 January, UNDRO held an information meeting for United Nations agencies and Non governmental organizations to brief them on the relief co-ordination work carried out by the UNDRO delegate during his mission to Romania.

At the request of the Government, he returned to Romania from 17 - 24 January, and worked with representatives of the Ministry of Foreign Affairs and the the National Co-ordinator for Humanitarian Assistance on questions related to the distribution of relief assistance and on identifying additional requirements.

■ **Sri Lanka:** UNDRO issued two information reports on floods and landslides which occurred following heavy rains since the end of December. Some 33 persons are known to have died, 400,000 people have been affected and 9,000 houses have been reported damaged.

■ **Tunisia:** After heavy rains caused serious floods in central and southern Tunisia, UNDRO issued an international appeal and organized the airlift of relief supplies for the homeless *(see article on page 31)*.

■ **PCDPPP Meeting of Advisory Board:** The Project Manager, representatives of UNDRO, PAHO, LRCS and CARICOM (Caribbean Community), and four National Disaster Co-ordinators from the Caribbean region met in Antigua on 25 and 26 January. The purpose of the meeting was to take stock of activities of the three project components (UNDRO, PAHO, LRCS) in 1989; review regional disaster co-ordination arrangements; fix priorities for 1990, focussing on a regional mechanism to continue disaster mitigation activities after the project is concluded at year end. Links between this regional mechanism and IDNDR will also be on the agenda.

■ **Relief Depot in Rome:** Early this year UNDRO will rent a compound of about 13,500 m² in Rome, Italy from a construction firm, to create a second relief depot in addition to its Pisa warehouse, for the assembling, storage and immediate despatch of emergency supplies to disaster-stricken areas. About 5,000 m² of this compound consist of hangars which UNDRO will entirely recondition and adapt to the requirements of its emergency operations.

To review preparations for this large-scale project, which will be funded by the Italian Government, UNDRO's Director and Deputy to the Co-ordinator, Mr. Ferdinand Mayrhofer-Grunbuhel recently met in Rome with Ambassador Paolo Galli, Director-General for Development Co-operation, and Minister Manfredo Incisa di Camerana, Co-ordinator for Multilateral Assistance.

They reviewed the legal, administrative and operational aspects of the depot as well as the contents of the Basic Agreement the Government of Italy and UNDRO are ex-

pected to sign soon. UNDRO's Director was accompanied by the Senior Relief Co-ordination Officer responsible for the project.

DISASTER MITIGATION

■ **Seismic Risk Reduction in the Mediterranean Region:** A working group of experts from the member countries and international consultants met at the project's headquarters in Genoa, Italy, from 22 to 26 January 1990, to prepare for the first major activity of the project, a Regional Workshop on the application to disaster mitigation of seismic hazard assessment and mapping, with special reference to land-use planning. The Workshop will be held in Genoa from 7 to 11 May 1989, and will be immediately followed by the 2nd meeting of the project's Steering Committee on 11 May 1990.

■ **Colombia:** The Chief Technical Adviser of UNDRO's Disaster Mitigation Project in Colombia carried out a field mission from 15 to 29 January 1990. He reviewed progress made with each of the principal themes and assisted the National Disaster Management Office with drafting of the proposal for the second phase of the project, and with preparations for the regional seminar "Earthquakes in Big Cities" scheduled for July 1990.

■ **Lesotho, Malawi, Zimbabwe:** Un fonctionnaire de l'UNDRO accompagné d'un consultant, s'est rendu au Lesotho, au Zimbabwe et au Malawi entre le 21 janvier et le 11 février 1990. L'objectif principal de cette mission a été de promovoir les activités dans le domaine de la planification préalable des secours en cas de catastrophe.

■ **Saudi Arabia:** An UNDRO consultant has carried out a comprehensive review of Saudi Arabia's Civil Defence system, and provided recommendations for training at all levels of the system. A follow-up phase to initiate training of Saudi Civil Defence staff is expected to begin in September 1990.

■ **The Disaster Mitigation Branch** has just completed a preliminary study to determine the feasibility of developing a quantitative measure of the degree to which a given country is disaster-prone. Some 190 countries were included in the study, including all least developed countries. Sufficient information was available to determine an index for some 130 of these. The index was based on the ability of the economies of these countries to absorb the effects of disasters which occurred over the last twenty years. The results of the study are promising, and UNDRO is hoping to be able to proceed now with an in-depth study based on the analysis of these results and incorporation of additional data and parameters.

INFORMATION, COMMUNICATIONS, EXCHANGE OF VIEWS AND CONTACTS

■ **Le Secrétaire d'Etat auprès du Premier Ministre,** Chargé de l'Action Humanitaire, de la République française, le Docteur Bernard Kouchner a tenu le mardi 23 janvier, à Genève, une conférence sur "L'Epidémiologie des catastrophes et déontologie des secours", en réponse à une invitation du Coordonnateur des Nations Unies pour les secours en cas de catastrophe.

UNDRO

La conférence du Dr Kouchner s'inscrivait dans le cadre des conférences que l'UNDRO organise, depuis plusieurs années, à l'intention des Mission permanentes des gouvernements auprès de l'Office des Nations Unies à Genève, des organisations non-gouvernementales, des institutions des Nations Unies spécialisées dans les secours humanitaires ainsi que des mass média, pour étudier différents aspects de la gestion des secours en cas de catastrophe.

■ **UNESCO/UNDRO Co-operation for Preparing Training Materials for Disaster Mitigation:** On 31st January two officials from UNESCO's Division of Earth Sciences, Dr. Hashizume and Dr. Oesberg, visited UNDRO's Disaster Mitigation Branch to discuss possible forms of co-operation in jointly developing Training Materials for Disaster Mitigation. One of the key documents for preparing these materials could be the UNDRO disaster mitigation manual "Mitigating Natural Disasters" due for publication this year.

■ **Organisations non-gouvernementales :** Une fonctionnaire de l'UNDRO a pris part le 24 janvier 90 a une réunion Inter-Nations Unies sur les relations avec les organisations non-gouvernementales. Des représentants d'une dizaine d'organisations du système y ont rendu compte de leurs initiatives avec ou en faveur des ONG.

■ **The UNDP/UNDRO Resident Representative from Mauritania** visited UNDRO on 17 January 1990. He gave an update on the drought situation in the country, which was not an extreme problem for the moment. He met with senior UNDRO staff and was briefed on the various activities of the Office as well as on the IDNDR.

■ **Visitors to UNDRO's Headquarters, in Geneva,** during the month of January 1990, included: *Mr. J. Watt,* Assistant Head of the United Department, Foreign Office, United Kingdom; *Mr. E. Sumida,* Head of JICA (Japan International Cooperation Agency), with his Deputy, *Mr. Seki*; and *Mr. Arsenault,* Head of the Canadian International Development Agency, CIDA. ■

LRCS Urges Active Role for National Societies

(continued from page 9)

Germany (FR), United Kingdom, Japan, the Netherlands, Norway, Sweden and Switzerland; the formation and training of an Armenian Red Cross Rescue Team, called the Spitak Rescue Team, with the support of the German (FR) Red Cross; assistance to the Chinese Red Cross in establishing their disaster preparedness scheme financed by the Japanese Government/Red Cross, these are some examples of on-going projects within the framework of international co-operation in support of the IDNDR.

The League is certainly an ideal partner for the United Nations in its efforts to take the important worldwide message of IDNDR to the grass-roots level. National Societies, thanks to their experience, will play an important role in the National IDNDR Committees which will be created throughout the world.

In this context, I assure full support of the League to the IDNDR, and would like to express my very best wishes for the successful implementation of the objectives, which can be achieved only through the fully co-ordinated collaboration of the entire international community.

■

Message from Mr. Pär Stenbäck, Secretary General, League of Red Cross and Red Crescent Societies.

Cyclone shelters where people can take refuge from rising flood waters and storm surges. LRCS

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Publié tous les deux mois par le Bureau du Coordonnateur des Nations Unies pour les secours en cas de catastrophe.

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Printed at United Nations, Geneva
GE.90-00309-February 1990-9,000

UNDRO/90/NL/1
ISSN 0250-9377

Courtesy of

UNDRO News

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